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REVISION HISTORY

REVISION	DESCRIPTION	DATE
1.0	First Release	Jun 08
2.0	Support for firmware 1.03 Build 1 (and above).	Oct 08
3.0	Support for firmware 1.04 Build 55 (and above).	Mar 09

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1. OVERVIEW

The 7700R-SC-BRC facilitates the following bidirectional router control scenarios:

Evertz Control

Evertz controls a third party router/controller. The 7700R-SC-BRC receives a request from an EQX server, translates it into a third-party router protocol request and, in turn, passes it along to the third-party router either directly or a via a system controller.

Third-Party Control

A third-party controls an Evertz router. The 7700R-SC-BRC receives a request from a third-party control device, translates it into a Quartz Remote Control protocol request and, in turn, passes it along to the Evertz router either directly or via an EQX server.



Figure 1-1: Functional Overview



2. CARD EDGE CONTROLS

2.1. DETERMINING CURRENT IP ADDRESS SETTINGS

To read the current IP address during normal operation, press the front switch DOWN. The IP address can be read on the four-character LCD.

2.2. RESTORING FACTORY DEFAULTS

To restore all settings to factory defaults, apply power to the card while holding the toggle switch UP until the LCD begins to scroll *7700R-SC-BRC*.

2.3. DEBUG/MONITOR PORT

Some parameters of the 7700R-SC-BRC must be configured via its debug/monitor port. A special Evertz adapter cable allows this port to connect to the COM port of a personal computer. The following steps describe this procedure.

- 1. Locate the small, keyed, four-pin end of the upgrade cable provided by Evertz.
- 2. Connect it to the four-pin interface located beside the LCD.
- 3. Connect the other end of the upgrade cable to a straight-through serial cable. Connect the serial cable to the serial or COM port of the computer.
- 4. Initiate HyperTerminal on your computer by selecting: *"Start\Programs\Accessories\Communications\HyperTerminal."*
- 5. Enter a name for your connection, for example: Evertz.
- 6. Press the <Enter> key. A new "Connect To" window will appear.

Connect To	? ×
🇞 VIP	
Enter details for	the phone number that you want to dial:
<u>C</u> ountry/region:	United States of America (1)
Ar <u>e</u> a code:	905
Phone number:	
Connect using:	COM1
	OK Cancel

Figure 2-1: 'Connect To' Window

- 7. In the "*Connect using*" region, select COM1 from the drop down menu. If COM1 is in use, select an alternate COM port.
- 8. Press the <Enter> key or select OK. This opens the "COM Properties" window.



	_
Port Settings	
Bits per second: 115200	
Data bits: 8	
Earry: None	
Stop bits: 2	
Elow control: None	
<u>R</u> estore Defaults	┙╽
OK Cancel App	y I

Figure 2-2: COM1 Properties

- 9. Enter the information for the COM1 Properties settings as listed in the screen above.
- 10. Press the <Enter> key or select OK. The "COM Properties" window closes, leaving the HyperTerminal window open.
- 11. Apply power if the 7700R-SC-BRC does not have power. The boot sequence and Main Menu are displayed in the HyperTerminal window.
- 12. If the 7700R-SC-BRC has power, press the <Enter> key to view the 7700R-SC-BRC's menu system (Figure 2-3).

🇞 c3_dbg - HyperTerminal	
File Edit View Call Transfer Help	
Initialize the serial interface task Initialize the Evertz control tasks Initialize the third-party control tasks Initialize the SNMP task Initialize FTPD Initialize and start the user menu 	
<pre>(1) Network Configuration (2) SNMP Setup (3) Engineering/Debug (X) Exit ></pre>	
Connected 1:51:13 ANSI 115200 8-N-2 SCROLL CAPS NUM Capture Print echo	

Figure 2-3: 7700R-SC-BRC Main Menu



3. DB25 PINOUT

The serial interfaces of the 7700R-SC-BRC are accessible via the DB-25 connector. Figure 3-1 shows the numbering scheme of the pins:



Figure 3-1: DB25 Pin Numbers

Serial Interface/UART	Connects To	Pin	RS-422 Function	RS-232 Function
		1	TX-	ТХ
1	Third-party control	2	TX+	
	device	14	RX-	RX
		15	RX+	
		3	TX-	ТХ
2	Evertz router	4	TX+	
2		16	RX-	RX
		17	RX+	
		5	TX-	ТХ
2	Third-party	6	TX+	
5	router/controller	18	RX-	RX
		19	RX+	
		9		
		10	Ground	Ground
		22		

Table 3-1: DB25 Pin Functions

3.1. 3500 CONTROLLER PINOUTS

3.1.1. RS-232

Pin	Function
2	Rx
3	Тх
5	Gnd

Table 3-2: 3500 RS-232 Wiring

The 3500 typically uses RS-232 flow control signals. The 7700R-SC-BRC does not. Figure 3-2 shows how to accommodate the flow control signals.





Figure 3-2: Accommodating RS-232 Flow Control Signals

3.1.2. RS-422

Pin	Function
7	Rx-
2	Rx+
3	Tx-
8	Tx+
1, 4, 5, 6, or 9	Gnd

Table 3-3: 3500 RS-422 Wiring

3.2. SH612 PINOUT

The RS-422 pinout of the SH612's DB9 connector is given in Table 3-4.

Pin	Function
8	Rx-
3	Rx+
2	Tx-
7	Tx+
1	Gnd

Table 3-4: SH612 RS-422 Pinout

The SH612 typically uses serial settings 38400, 8, Odd, 1.



3.3. REMOTE 2 (CART++) DEVICE PINOUT

The RS-422 pinout of a typical Remote 2 (Cart++) device is given in Table 3-5.

Pin	Function
2	TX-
3	RX+
4	GND
7	TX+
8	RX-

Table 3-5: Remote 2 (Cart++) Device Pinout

Remote 2 (Cart++) devices often use serial settings 38400, 8, Even, 1.



4. MENU SYSTEM CONFIGURATION

The parameters mentioned in this section can only be configured by using the menu system of the 7700R-SC-BRC. Section 2.3 details how to access the menu system.

4.1. NETWORK PARAMETERS

🇞 c3_dbg - HyperTerminal	
File Edit View Call Transfer Help	
Network Configuration (7700R-SC-BRC v1.01 b1)	
MAC: 00:02:c5:10:60:bb ip address: 192.168.18.54 netmask address: 255.255.255.0 gateway: 0.0.0.0 broadcast address: 192.168.18.255 DHCP enabled: False	
<pre>(1) Set IP Address (2) Set Netmask (3) Set Gateway (4) Set Broadcast Address (5) Use DHCP (S) Save and Exit (X) Exit</pre>	
Connected 1:58:19 ANSI 115200 8-N-2 SCROLL CAPS NUM Capture Print echo	

Figure 4-1: 7700R-SC-BRC Network Configuration Menu

- 1. From the Main Menu select Network Configuration.
- 2. If the 7700R-SC-BRC is to automatically obtain its network settings from a DHCP server, use the Use DHCP menu entry to set DHCP enabled to True. Go to step 7.
- 3. For static network settings use the Use DHCP menu entry to set DHCP enabled to False.
- 4. Select Set IP Address then enter the IP address of the 7700R-SC-BRC.
- 5. Select Set Netmask then enter the subnet mask of the 7700R-SC-BRC.
- 6. Optionally, select *Set Gateway* then enter the IP address of a gateway associated with the subnet.
- 7. Select *Save* and *Exit* before exiting the *Network Configuration* to save the settings, otherwise select *Exit*.
- 8. Reboot the 7700R-SC-BRC.
- 9. Ensure the VLPro machine can ping the 7700R-SC-BRC.

The 7700R-SC-BRC must be rebooted for any network setting changes to take effect.



4.2. SNMP SETTINGS

🍣 c3_dbg - HyperTerminal	
File Edit View Call Transfer Help	
 Main Menu (7700R-SC-BRC v1.01 b1)	
 (1) Network Configuration (2) SNMP Setup (3) Engineering/Debug 	
(X) Exit > 2	
SNMP Setup (7700R-SC-BRC v1.01 b1)	
 (1) Trap Setup (2) Community Setup (8) Exit 	
Connected 2:08:43 ANSI 115200 8-N-2 SCROLL CAPS NUM Capture Print echo	

Figure 4-2: 7700R-SC-BRC SNMP Setup Menu

- 1. From the Main Menu select SNMP Setup.
- 2. Use *Trap Setup* to add the IP address of any trap destination(s).
- 3. If changes to the default community strings are required, use *Community Setup* to change the *read-only* and *read-write* community strings.
- 4. Select Save & Exit to save any changes. Select Exit to discard changes.
- 5. Changes to the community strings require a reboot of the 7700R-SC-BRC. Changes to the trap destinations do not require a reboot of the 7700R-SC-BRC.



Changes to trap destinations do not require a reboot of the 7700R-SC-BRC. Changes to the community strings do require a reboot of the 7700R-SC-BRC.



5. VISTALINK_® PRO (VLPRO) CONFIGURATION

This section details how to use VLPro to configure the remaining parameters of the 7700R-SC-BRC.

5.1. VLPRO CONFIGURATION VIEW

🗢 VistaLINK PRO (Stan	dalone) - 192.	168.18.54			
<u>F</u> ile T <u>r</u> ee <u>A</u> larm <u>C</u>	onfiguration A	u <u>d</u> it <u>P</u> reset	<u>T</u> ools	<u>W</u> indow	<u>H</u> elp
Navigation Tree	View <u>Confi</u> <u>Save</u> Load <u>R</u> efresh Up <u>d</u> ate Des	guration • • • •			

Figure 5-1: VLPro Hardware Navigation Tree

Suppose the IP address of the 7700R-SC-BRC is 192.168.18.54. To open the VLPro configuration view associated with the 7700R-SC-BRC:

- 1. Launch VLPro. The IP address of the 7700R-SC-BRC, 192.168.18.54, should appear in the hardware navigation tree.
- 2. Right click on the IP address.
- 3. Click View Configuration.
- 4. The configuration view should appear.



5.2. GENERAL TAB

📟 192.168.18.54, 7700RSCBRC: Configuration		d X
Refresh 췭 췭 1.0 Apply 🌉 🌉		
General \langle Evertz Control Configuration \langle Evertz Control Status \langle Thi	rd-Party Control Configuration \ Third-Party Control Status \	
7700R-SC-BRC	Event Log	_
Mib Revision 1	Event Log Current Index 5	
Firmware Version 1.01 build 1	Event Log Clear False 🔻	
Serial Number unknown		
Reboot False 👻	Index Description	
NTP Sever Ip Address (0.0.0 to disable) 0.0.0 Packets Sent 0 Packets Sectived 0 Current Date And Time +/- +/- hh mm Local Offset + 0 0 UTC 2008 3 7 0 24 47	2 2008/03/07 00:00:09 Third-party control: no protocol loop 3 2008/03/07 00:00:09 Evertz router: serial transport numSrc 1 numDst 1 rmvNum yes 4 2008/03/07 00:00:09 System initialized and running	
Local 2008 3 7 0 24 47		

Figure 5-2: General Tab

ltem	Notes
MIB Revision	Displays the MIB revision being used by the 7700R-SC-BRC.
Firmware Version	Displays the firmware version being used by the 7700R-SC-BRC.
Serial Number	Reports the serial number of the 7700R-SC-BRC.
Reboot	Allows the 7700R-SC-BRC to be rebooted. To do so, set the box to True.
NTP: Server IP Address	Optional. Allows the IP address of an NTP server to be configured. The 7700R-SC-BRC can use the time fetched from the server to timestamps the entries it puts into its event log.
NTP: Packets Sent	Reports the number of NTP request packets sent by the 7700R-SC-BRC to the NTP server.
NTP: Packets Received	Reports the number of NTP packets received by the 7700R-SC-BRC.
Current Date And Time	The 7700R-SC-BRC reports the time in two ways: Universal Co-ordinated Time (UTC) and Local Time. The local time is derived from UTC via the <i>Local Offset</i> parameters. To set these parameters, use the boxes to select the offset appropriate for your time zone.
Event Log	The 7700R-SC-BRC can communicate error and status information via its event log. The <i>Event Log Current Index</i> reports the position at which the next log entry would be placed. The event log can be cleared by setting <i>Event Log Clear</i> to <i>True</i> .

 Table 5-1: General Tab Parameters



5.3. EVERTZ CONTROL CONFIGURATION TAB

5.3.1. General Frame

Configuration Up-to-Date		Verbose Logging	
Do Configuration Update	False	•	
Transmit Router Communi	cation Status Trap	s 💌	
Transmit Router Session S	tatus Traps	V	

Figure 5-3: General Frame

ltem	Notes
Configuration Up-To- Date	Green: The Evertz control configuration parameters are up-to-date and are being used to communicate with the third-party router. Red: The configuration parameters need to be updated via <i>Do Configuration Update</i> before the 7700R-SC-BRC can start using them.
Verbose Logging	When checked, the 7700R-SC-BRC will log events which may help with troubleshooting protocol-related issues. For normal operation, this box should be unchecked.
Do Configuration Update	When set to <i>True</i> , instructs the 7700R-SC-BRC to reset communications with the third-party router and to make use of any parameter changes.
Transmit Router Communication Status Traps	When checked, the 7700R-SC-BRC will transmit an SNMP trap when there is a change in the communication status between it and the third-party router.
Transmit Router Session Status Traps	When checked, the 7700R-SC-BRC will transmit an SNMP trap when there is a change in the session status between it and the third-party router. The EQX server may connect to and issues requests to the 7700R-SC-BRC once the router session has become active.

Table 5-2: General Frame Parameters



When the *Configuration Up-To-Date* status box is red, *Do Configuration Update* must be set to true for the 7700R-SC-BRC to begin using any parameter changes.



5.3.2. Third-Party Router Sources Frame

Number	8	
Source	Name	
1	Src 1	
2	Src 2	
3	Src 3	
4	Src 4	
5	Src 5	

Figure 5-4: Third-Party Router Sources Frame

5.3.2.1. Number of Router Sources

These third-party protocols do not afford the 7700R-SC-BRC the ability to automatically determine the number of third-party router sources:

- CPU Link No. 1
- VMSI 3000 ASCII
- Remote 2/Cart++
- EScontrol

As such, the number of router sources must be manually entered into this field. This field is ignored for third-party router protocols which do allow the 7700R-SC-BRC to automatically determine the number of router sources.

5.3.2.2. Source Names

These third-party protocols do not afford the 7700R-SC-BRC the ability to automatically determine the names of router sources:

- CPU Link No. 1
- VMSI 3000 ASCII
- NVEP
- Remote 2/Cart++
- EScontrol

Optionally, these names can be entered into these fields. These fields are ignored for third-party router protocols which do allow the 7700R-SC-BRC to automatically determine the source names.



5.3.3. Third-Party Router Destinations Frame

Number [8	
Destination	Name	_
1	Dst 1	
2	Dst 2	
3	Dst 3	
4	Dst 4	
5	Dst 5	

Figure 5-5: Third-Party Router Destinations Frame

5.3.3.1. Number of Router Destinations

These third-party protocols do not afford the 7700R-SC-BRC the ability to automatically determine the number of third-party router destinations:

- CPU Link No. 1
- VMSI 3000 ASCII
- Remote 2/Cart++
- EScontrol

As such, the number of router destinations must be manually entered into this field. This field is ignored for third-party router protocols which do allow the 7700R-SC-BRC to automatically determine the number of router destinations.

5.3.3.2. Destination Names

These third-party protocols do not afford the 7700R-SC-BRC the ability to automatically determine the names of router destinations:

- CPU Link No. 1
- VMSI 3000 ASCII
- NVEP
- Remote 2/Cart++
- EScontrol

Optionally, these names can be entered into these fields. These fields are ignored for third-party router protocols which do allow the 7700R-SC-BRC to automatically determine the destination names.



5.3.4. Third-Party Router Transport Frame

Protocol	VMSI	3000 ASCII 👻	Baud	115200	-
Туре	Seria	I (UART 3) 🔻	Data Bits	8	•
Pri lp Addr	ess	0.0.0.0	Parity	None	•
Pri Port		0	Stop Bits	1	-
Sec Ip Add	ress	0.0.0.0	Standard	RS232	•
Sec Port		0]		

Figure 5-6: Third-Party Router Transport Frame

Item	Notes
Protocol	Specifies the protocol of the third-party router. The protocol <i>None</i> should be used when no third-party router is connected to the 7700R-SC-BRC.
Туре	Specifies the type of transport that carries the third-party protocol.
Pri lp Address	When the transport type is set to <i>TCP</i> , this field specifies the primary IP address of the third-party router. The third-party router will listen for incoming TCP connection requests from the 7700R-SC-BRC.
Pri Port	When the transport type is set to <i>TCP</i> , this field specifies on which primary port the third-party router will listen for incoming TCP connection requests from the 7700R-SC-BRC. For NVEP-based routers, this value is typically 5194. For NV9000 controllers, this value is typically 9193.
Sec Ip Address	When the transport type is set to <i>TCP</i> , this field specifies the secondary IP address of the third-party router. The third-party router will listen for incoming TCP connection requests from the 7700R-SC-BRC.
Sec Port	When the transport type is set to <i>TCP</i> , this field specifies on which secondary port the third-party router will listen for incoming TCP connection requests from the 7700R-SC-BRC. For NVEP-based routers, this value is typically 5194.
Baud	When the transport type is set to <i>Serial (UART 3)</i> , this field specifies the baud rate between the 7700R-SC-BRC and the third-party router.
Data Bits	When the transport type is set to Serial <i>(UART 3)</i> , this field specifies the number of data bits between the 7700R-SC-BRC and the third-party router.
Parity	When the transport type is set to <i>Serial (UART 3)</i> , this field specifies the parity between the 7700R-SC-BRC and the third-party router.
Stop Bits	When the transport type is set to Serial <i>(UART 3)</i> , this field specifies the number of stop bits between the 7700R-SC-BRC and the third-party router.
Standard	When the transport type is set to Serial <i>(UART 3)</i> , this field specifies the serial standard between the 7700R-SC-BRC and the third-party router.

Table 5-3: Third-Party Router Transport Frame Parameters



5.3.5. CPU Link No. 1 Configuration Frame



Figure 5-7: CPU Link No. 1 Configuration Frame

Item	Notes
Number Levels	Specifies the number of CPU Link Protocol No. 1 levels configured on the third-party router or controller – not just the number of levels Evertz is to control. The 7700R-SC-BRC is unable to automatically determine this value. This value <i>must</i> match that configured on the third-party router or controller. When using a 3500 controller, the configuration editor software, via the <i>Configuration/System Configuration/Configuration Info</i> toolbar, can be used to retrieve the number of levels configured on the 3500.
Evertz	Specifies the association between an Evertz level and a CPU Link No. 1 level. Figure 5-7 shows
Level	Evertz level 1 associated with CPU Link No. 1 level 1.

Table 5-4: CPU Link No. 1 Configuration Frame Parameters



5.3.6. VMSI 3000 Configuration Frame

Controller Uses Zero-Based Inputs And Outputs				
Transmit Session Init Cross	point Status Requ	ests [
Validate Crosspoint Set with	Get		2	
Destination Watch Refresh	Off		•	
Source Offset	0			
Destination Offset	0			
Level	Evertz Level	Level	Evertz Level	
1	1	5	Disabled 🔻	
2	Disabled 💌	6	Disabled 🔻	
3	Disabled 🔻	7	Disabled 🔻	
4	Disabled 👻			

Figure 5-8: VMSI 3000 Configuration Frame

Item	Notes
Controller Uses Zero-Based Inputs and Outputs	When checked, specifies that the VMSI 3000-based controller/router, from a protocol perspective, uses 0-based inputs and outputs. That is, the first input is 0 and the first output is 0. When not checked specifies 1-based inputs and outputs. That is, the first input is 1 and the first output is 1.
Transmit Session Init Crosspoint Status Requests	When checked, specifies that the 7700R-SC-BRC should explicitly solicit crosspoint statuses during its session initialization process. This is not required for normal operation.
Validate Crosspoint Set with Get	When checked specifies that the 7700R-SC-BRC will verify a crosspoint set with a get should no set response be obtained by the 7700R-SC-BRC.
Destination Watch Refresh	During the session initialization process the 7700R-SC-BRC requests the router/controller watch all its destinations. This instructs the router/controller to provide unsolicited destination status update messages to the 7700R-SC-BRC. Thus, when there is a change to a crosspoint, the router/controller will provide the 7700R-SC-BRC with an update. Should the router/controller expire this watch request, setting this parameter can instruct the 7700R-SC-BRC to refresh the watch on a periodic basis. Enabling the destination watch refresh has significance only if a non-Evertz panel (or some other non-Evertz control equipment) will change a crosspoint on the router/controller.
Source Offset	This field specifies the amount to add to the EQX server source number to obtain the VMSI 3000 source number. For normal operation this field should be set to 0.
Destination Offset	This field specifies the amount to add to the EQX server destination number to obtain the VMSI 3000 destination number. For normal operation this field should be set to 0.
Evertz Level	Specifies the association between an Evertz level and a VMSI 3000 level. Figure 5-8 shows Evertz level 1 associated with VMSI 3000 level 1.

Table 5-5: VMSI 3000 Configuration Frame Parameters



5.3.7. NVEP Configuration Frame

NVEP Configuration		
Monitor Crosspoints	Off	-

Figure 5-9: NVEP Configuration Frame

Item	Notes
	Specifies the rate at which the 7700R-SC-BRC will poll the NVEP-based router for crosspoint
Monitor	changes. Crosspoint monitoring has significance when the EQX server needs to be notified
Crosspoints	of router crosspoint changes invoked by equipment other than the EQX server (for instance,
•	NVEP panels).

Table 5-6: NVEP Configuration Parameters

5.3.8. Remote 2 (Cart++) Configuration Frame

Device	Level(UA2)	Evertz Level	Level(UA2)	Evertz Level
Other 👻	1(0x01)	1	5(0x10)	Disabled 🔻
	2(0x02)	Disabled 💌	6(0x20)	Disabled 💌
Monitor Crosspoints	3(0x04)	Disabled 💌	7(0x40)	Disabled 💌
Off 🔹	4(0x08)	Disabled 🔻	8(0x80)	Disabled 💌

Figure 5-10: Remote 2 (Cart++) Configuration Frame

ltem	Notes
Device	Specifies the device to which the 7700R-SC-BRC is connected.
Monitor Crosspoints	Specifies the rate at which the 7700R-SC-BRC will poll the remote 2 (cart++)-based router for crosspoint changes. Crosspoint monitoring has significance when the EQX server needs to be notified of router crosspoint changes invoked by equipment <i>other</i> than the EQX server (for instance, panels).
Evertz Level	Specifies the association between an Evertz level and a remote 2 level. Figure 5-10 shows Evertz level 1 associated with remote 2 level 1.

Table 5-7: Remote 2 (Cart++) Configuration Parameters

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5.3.9. EScontrol Configuration Frame

EScontrol Configuration			⊐ ₀
Evertz Level	1	•	
Router Uses Zero-basi	ed Inputs and Outputs	V	
Router Loses Crosspo	ints on Power Cycle	V	

Figure 5-11: EScontrol Configuration Frame

Item	Notes
EScontrol level	Specifies the level over which the EScontrol-based router exchanges crosspoint
Evertz Level	Specifies the Evertz level associated with the EScontrol level
Router Uses Zero- Based Inputs and Outputs	When checked, specifies that the EScontrol-based router, from a protocol perspective, uses 0-based inputs and outputs. That is, the first input is 0 and the first output is 0. When not checked, specifies 1-based inputs and outputs. That is, the first is, the first input is 1 and the first output is 1. SH612s typically use zero-based inputs and outputs.
Router Loses Crosspoints on Power Cycle	When checked, specifies that the EScontrol-based router will lose its crosspoint information when power is cycled on the router. For this scenario, the 7700R-SC-BRC will attempt to restore the crosspoints when the router is powered on. When not checked, specifies that the EScontrol-based router maintains its crosspoint information on a cycle of its power. SH612s typically lose their crosspoints on a power cycle.

 Table 5-8: EScontrol Configuration Parameters



5.4. EVERTZ CONTROL STATUS TAB

5.4.1. General Frame

General	
Third-Party Router Communication Status	
Third-Party Router Session Status	

Figure 5-12: General Frame

ltem	Notes
Third-Party Router Communication Status	Green: The 7700R-SC-BRC is able to communicate with the third-party router. Red: The 7700R-SC-BRC is not able to communicate with the third-party router.
Third-Party Router Session Status	Green: The 7700R-SC-BRC has established a session with the third-party router. The EQX server can connect to and issue requests to the 7700R-SC-BRC. Red: The 7700R-SC-BRC has not established a session with the third-party router. EQX server connections will not be permitted by the 7700R-SC-BRC.

Table 5-9: General Frame Parameters



5.4.2. Third-Party Router Sources Frame

Number	256	
Source	Name	
1	Src 1	-
2	Src 2	23
3	Src 3	
4	Src 4	
5	Src 5	
6	Src 6	
7	Src 7	
8	Src8	
9	Src 9	
10	Src 10	
11	Src 11	
12	Src 12	
13	Src 13	
14	Src 14	
15	Src 15	
16	Src 16	-

Figure 5-13: Third-Party Router Sources Frame

Item	Notes
Number	Reports the number of manually entered or automatically obtained third-party router sources.
Name	Reports the names of the manually entered or automatically obtained third-party router sources.

Table 5-10: Third-Party Router Sources Frame Parameters



5.4.3. Third-Party Router Destinations Frame

Nan Dst 1 Dst 2 Dst 3	ne
Dst 1 Dst 2 Dst 3	-
Dst 2 Dst 3	32
Dst 3	
0010	
Dst 4	
Dst 5	
Dst6	
Dst 7	
Dst 8	
Dst 9	
Dst10	
Dst11	
Dst12	
Dst13	
Dst14	
Dst15	
Dst16	-
	Dst 4 Dst 5 Dst 6 Dst 7 Dst 8 Dst 9 Dst 10 Dst 10 Dst 11 Dst 12 Dst 12 Dst 13 Dst 14 Dst 15 Dst 16

Figure 5-14: Third-Party Router Destination Frame

ltem	Notes
Number	Reports the number of manually entered or automatically obtained third-party router destinations.
Name	Reports the names of the manually entered or automatically obtained third-party router destinations.

Table 5-11: Third-Party Router Destination Frame Parameters



5.4.4. Third-Party Router Crosspoints Frame

								Even	z Levels	5						
Destination	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
l	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
·	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	256	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	228	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Figure 5-15: Third-Party Router Crosspoints Frame

This frame reports the third-party router crosspoint map in terms of an Evertz crosspoint map. The source and destination numbers are presented 1-based regardless of the third-party router protocol used. For example, Figure 5-15 shows:

- Source 4 is routed to destination 1 on Evertz level 1.
- Source 256 is routed to destination 9 on Evertz level 1.

5.5. THIRD-PARTY CONTROL CONFIGURATION TAB

5.5.1. General Frame



Figure 5-16: General Frame



Item	Notes
Configuration Up-To- Date	Green: The third-party control configuration parameters are up-to-date and are being used to communicate with the Evertz router. Red: The configuration parameters need to be updated via <i>Do Configuration Update</i> before the 7700R-SC-BRC can start using them.
Verbose Logging	When checked, the 7700R-SC-BRC will log events which may help with troubleshooting protocol-related issues. For normal operation, this box should be unchecked.
Do Configuration	When set to True, instructs the 7700R-SC-BRC to reset communications with the
Update	Evertz router or EQX server and to make use of any parameter changes.
Transmit Router	When checked, the 7700R-SC-BRC will transmit an SNMP trap when there is a
Communication Status	change in the communication status between it and the Evertz router or EQX
Traps	server.
Transmit Router Session Status Traps	When checked, the 7700R-SC-BRC will transmit an SNMP trap when there is a change in the session status between it and the Evertz router or EQX server. The third-party control device may connect to and issues requests to the 7700R-SC-BRC once the router session has become active.

Table 5-12: General Frame Parameters



When the *Configuration Up-To-Date* status box is red, *Do Configuration Update* must be set to true for the 7700R-SC-BRC to begin using any parameter changes.

5.5.2. Evertz Router Transport Frame

Protocol	Quartz	-
Туре	Serial (UART 2)	•
Baud	38400	•
Data Bits	8	•
Parity	None	•
Stop Bits	1	•
Standard	RS232	•
lp Address	0.0.0.0	
Port	0	

Figure 5-17: Evertz Router Transport Frame



Item	Notes
Protocol	Specifies the protocol to be used between the 7700R-SC-BRC and the router or EQX server. When communicating with a router this value is set to <i>Quartz</i> . When communicating with the EQX server this value is set to <i>Symphony</i> .
Туре	Specifies the type of communication transport between the 7700R-SC-BRC and the Evertz router or EQX server. The Evertz router typically supports either serial or TCP communication types. The EQX server supports only TCP.
Baud	When the transport type is set to <i>Serial (UART 2)</i> , this field specifies the baud rate between the 7700R-SC-BRC and the Evertz router.
Data Bits	When the transport type is set to Serial (UART 2), this field specifies the number of data bits between the 7700R-SC-BRC and the Evertz router.
Parity	When the transport type is set to <i>Serial (UART 2)</i> , this field specifies the parity between the 7700R-SC-BRC and the Evertz router.
Stop Bits	When the transport type is set to Serial (UART 2), this field specifies the number of stop bits between the 7700R-SC-BRC and the Evertz router.
Standard	When the transport type is set to Serial (UART 2), this field specifies the serial standard between the 7700R-SC-BRC and the Evertz router.
lp Address	When the transport type is set to <i>TCP</i> , this field specifies the IP address of the Evertz router or EQX server.
Port	When the transport type is set to <i>TCP</i> , this field specifies on which port the Evertz router or EQX server will listen for incoming TCP connection requests from the 7700R-SC-BRC. When using the <i>Symphony</i> protocol the EQX server listens on port <i>9750</i> .

Table 5-13: Evertz Router Transport Frame Parameters

5.5.3. Evertz Router Configuration Frame

-Evei Nu	rtz Ro mber	of S	ourc	figui es	ration	י <u> </u>	10						-		
Nu	mber	of D	estir	natio	ns	1	ř.								
Re	move	Pre	pend	led S	Sourc	e &	Desti	natio	on Nu	umb	ers	V	2		
Su	pport	ed L	evels												
1	1	2		3		4		5		6		7		8	
9		10		11		12		13		14		15		16	
Pro	ofile N	lame	e												

Figure 5-18: Evertz Router Configuration Frame



Item	Notes
Number of Sources	Specifies the number of sources configured on the Evertz router. This field has no significance when communicating with the EQX server.
Number of Destinations	Specifies the number of destinations configured on the Evertz router. This field has no significance when communicating with the EQX server.
Remove Prepended Source & Destination Numbers	Some Evertz equipment, for instance the SC-1000, can prepend a number (for instance '001,') to a source or destination's name. If this box is checked then the 7700R-SC-BRC will remove this number. This field has no significance when communicating with the EQX server.
Supported Levels	Boxes that are checked represent the level(s) supported by the router. This field has no significance when communicating with the EQX server.
Profile Name	When communicating with the EQX server this field represents the profile to be used by the 7700R-SC-BRC. This field has no significance when communicating with a router using the Quartz protocol.

Table 5-14: Evertz Router Configuration Frame Parameters

5.5.4. Control Transport Frame

Protocol	None	•
Туре	Serial (UART 1)	-
Baud	38400	-
Data Bits	8	•
Parity	None	•
Stop Bits	1	•
Standard	RS422	-
IP Address	0.0.0.0	
Port	0	

Figure 5-19: Control Transport Frame



Item	Notes			
Protocol	Specifies the protocol of the third-party control device. The protocol <i>None</i> should be used when no third-party control device is connected to the 7700R-SC-BRC.			
Туре	Specifies the type of transport that carries the third-party control device protocol.			
Baud	When the transport type is set to <i>Serial (UART 1)</i> , this field specifies the baud rate between the 7700R-SC-BRC and the third-party control device.			
Data Bits	When the transport type is set to Serial (UART 1), this field specifies the number of data bits between the 7700R-SC-BRC and the third-party control device.			
Parity	When the transport type is set to <i>Serial (UART 1)</i> , this field specifies the parity between the 7700R-SC-BRC and the third-party control device.			
Stop Bits	When the transport type is set to Serial (UART 1), this field specifies the number of stop bits between the 7700R-SC-BRC and the third-party control device.			
Standard	When the transport type is set to Serial <i>(UART 1)</i> , this field specifies the serial standard between the 7700R-SC-BRC and the third-party control device.			
IP Address	The field specifies the IP address of the third-party control device when the 7700R-SC-BRC is required to connect to the third-party control device. When the 7700R-SC-BRC is required to listen for incoming connection requests then this field can be set to 0.0.0.0.			
Port	 When the transport type is set to <i>TCP</i>, this field specifies: On which port the 7700R-SC-BRC will listen for incoming TCP connection requests from the third-party control device. The port the 7700R-SC-BRC will use for outgoing TCP connection requests to the third-party control device. ROT16 devices typically use port 8004. 			

Table 5-15: Control Transport Frame Parameters

5.5.5. CPU Link No. 1 Configuration Frame

lumber	Levels	1	•
_evel	Evertz Level	Level	Evertz Level
l.	1 -	9	Disabled 👻
2	Disabled 💌	10	Disabled 💌
3	Disabled 💌	11	Disabled 💌
1	Disabled 💌	12	Disabled 🔻
5	Disabled 💌	13	Disabled 👻
6	Disabled 💌	14	Disabled 👻
7	Disabled 💌	15	Disabled 💌
3	Disabled 💌	16	Disabled 💌

Figure 5-20: CPU Link No. 1 Configuration Frame



ltem	Notes
Number Levels	Specifies the number of CPU Link Protocol No. 1 supported by the 7700R-SC-BRC. This value, typically set to 1, should match the number of levels on the Evertz router or EQX server the third-party control device is to control.
Evertz	Specifies the association between an Evertz level and a CPU Link No. 1 level. Figure 5-20
Level	shows Evertz level 1 associated with CPU Link No. 1 level 1.

Table 5-16: CPU Link No. 1 Configuration Frame Parameters

5.5.6. EScontrol Configuration Frame

Controller Uses Zero-Based Inputs And Outputs	1
EScontrol Level	o
Evertz Level 1	•
Controller Transmits ACK	\checkmark

Figure 5-21: EScontrol Configuration Frame

ltem	Notes
Controller Uses Zero-Based Inputs and Outputs	When checked, specifies that the EScontrol-based controller/router, from a protocol perspective, uses 0-based inputs and outputs. That is, the first input is 0 and the first output is 0. When not checked, specifies 1-based inputs and outputs. That is, the first input is 1 and the first output is 1.
EScontrol Level	Specifies the level used by the EScontrol-based controller/router.
Evertz Level	Specifies the Evertz level associated with the EScontrol level.
Controller Transmits ACK	For normal operation this field should be checked.

Table 5-17: EScontrol Configuration Frame Parameters



5.5.7. ROT16 Configuration Frame

7700R-9	onfiguration SC-BRC Station Add	tress 💬		0x3
7700R-8	SC-BRC Product Co	ide 💳		_{0x65}
Virtual S	Virtual Source Offset 0		ř.	
Virtual D	estination Offset	0		
Level	Evertz Level	Level	Evertz Level	
1	1	5	Disabled 💌	
2	Disabled 🔻	6	Disabled 👻	
3	Disabled 💌	7	Disabled 💌	
4	Disabled 🔻	8	Disabled 🔻	

Figure 5-22: ROT16 Configuration Frame

Item	Notes
7700R-SC-BRC Station Address	The switcher/controller will be configured to be aware of the Evertz router/EQX server over which it will have control. As such, the switcher/controller will assign a SBUS hexadecimal station address to the Evertz router/EQX server. This field must match that address.
7700R-SC-BRC Product Code	Specifies the hexadecimal product code assigned by the switcher/controller to the Evertz router/EQX server.
Virtual Source Offset	The switcher has a router space which can accommodate a router with up to 1024 sources. Suppose sources $1 - 16$ are to be associated with the Evertz router/EQX server. Switcher source 1 corresponds to Evertz router source 1. Thus, the virtual source offset would be set to 0. Suppose sources $21 - 36$ are to be associated with the Evertz router/EQX server. Switcher source 21 corresponds to Evertz router source 1. Thus, the virtual source offset would be set to 20.
Virtual Destination Offset	The switcher has a router space which can accommodate a router with up to 1024 destinations. Suppose destinations $1 - 16$ are to be associated with the Evertz router/EQX server. Switcher destination 1 corresponds to Evertz router destination 1. Thus, the virtual destination offset would be set to 0. Suppose destinations $21 - 36$ are to be associated with the Evertz router/EQX server. Switcher destination 21 corresponds to Evertz router destination 1. Thus, the virtual destination 1. Thus, the virtual destination offset would be set to 20.
Evertz Level	Specifies the association between an Evertz level and a ROT16 level. Figure 5-22 shows Evertz level 1 associated with ROT16 level 1.

Table 5-18: ROT16 Configuration Frame Parameters



5.5.8. RCL Configuration Frame

System Name		R-SC-BR	С	
Area Name		BRC		
Area Nu	mber			= ₀
Level	Evertz Level	Level	Evertz Level	
0	1 •	16	Disabled 💌	
1	Disabled 🔻	17	Disabled 💌	
2	Disabled 💌	18	Disabled 💌	
3	Disabled 🔻	19	Disabled 💌	
4	Disabled 🔻	20	Disabled 💌	
5	Disabled 🔻	21	Disabled 💌	
6	Disabled 💌	22	Disabled 💌	
7	Disabled 💌	23	Disabled 💌	
8	Disabled 🔻	24	Disabled 💌	
9	Disabled 🔻	25	Disabled 💌	
10	Disabled 💌	26	Disabled 💌	
11	Disabled 🔻	27	Disabled 🔻	
12	Disabled 🔻	28	Disabled 🔻	
13	Disabled 🔻	29	Disabled 🔻	
14	Disabled 💌	30	Disabled 💌	
15	Disabled 💌	31	Disabled -	

Figure 5-23: RCL Configuration Frame

Item	Notes		
System Name	Assign a name to this RCL control system.		
Area Name	Assign Area Name. Areas create hierarchies within the control system and make it easier to group sources and destinations in a large system. Once an area is defined the sources and destinations in the area can be identified using fully qualified names. A source or destination name is said to be fully qualified if it is prefixed by "area name:"		
Area Number	Assign Area NumberName. 0 - 63. Areas create hierarchies within the control system and make it easier to group sources and destinations in a large system. Once an area is defined, the sources and destinations in the area can be identified using fully qualified indices. Source or destination indices need to be prefixed with "area index:" to make them fully qualified.		
Evertz Level	Specifies the association between an Evertz level and a RCL level. Figure 5-23 shows Evertz level 1 associated with RCL level 0.		

Table 5-19: RCL Configuration Frame Parameters



5.6. THIRD-PARTY CONTROL STATUS TAB

5.6.1. General Frame

General	
Evertz Router Communication Status	
Evertz Router Session Status	

Figure 5-24: General Frame

Item	Notes
Evertz Router	Green: The 7700R-SC-BRC is able to communicate with the Evertz router or EQX server.
Communication Status	Red: The 7700R-SC-BRC is not able to communicate with the Evertz router or EQX server.
Evertz Router Session	Green: The 7700R-SC-BRC has established a session with the Evertz router or EQX server. The third-party control device can issue requests to the 7700R-SC-BRC.
Status	Red: The 7700R-SC-BRC has not established a session with the Evertz router or EQX server. The 7700R-SC-BRC will ignore requests sent by the third-party control device.

Table 5-20: General Frame Parameters


5.6.2. Evertz Router Sources Frame

Number	0	
Source	Name	

Figure 5-25: Evertz Router Sources

Item	Notes
Number	Reports the number of Evertz router or EQX server sources.
Name	Reports the names of the automatically obtained Evertz router or EQX server sources.

Table 5-21: Evertz Router Frame Parameters



5.6.3. Evertz Router Destinations Frame

Number	0	
Destination	Name	

Figure 5-26: Evertz Router Destinations Frame

Item	Notes
Number	Reports the number of Evertz router or EQX server destinations.
Name	Reports the names of the automatically obtained Evertz router or EQX server destinations.

Table 5-22: Evertz Router Destinations Frame Parameters



5.6.4. Evertz Router Crosspoints Frame

	Evertz Levels															
estination	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Figure 5-27: Evertz Router Crosspoints Frame

This frame reports the Evertz router or EQX server crosspoint map. The source and destination numbers are presented 1-based.



6. EQX SERVER SOURCES AND DESTINATIONS

Currently, there is no way for the 7700R-SC-BRC to automatically obtain the sources and destinations from the EQX server. As such, they need to be set manually on the 7700R-SC-BRC. This is done by creating 2 files to be put on the 7700R-SC-BRC's compact flash:

symp_src.csv – Contains the sources to be used.

symp_dst.csv – Contains the destinations to be used.

A subset of sources and destinations can be used. For instance, suppose we had a switcher which is controlling an EQX router via the EQX server. The switcher may think it is communicating with a 324 x 12 router. Thus, the switcher would deal with sources 1 - 324 and with destinations 1 - 12. For this case, symp_src.csv would contain the names of the 324 sources to be controlled by the switcher. Similarly, symp_dst.csv would contain 12 destination names.

This section provides an example of how to create and store the *csv* files.

6.1. EQX SERVER

6.1.1. Devices

Suppose the 7700R-SC-BRC is interested in the sources and destinations associated with a Xenon 128 x 128 router.



7700 MultiFrame Manual 7700R-SC-BRC Bidirectional Router Control

Device Configuration	- Mozilla Firefox					
<u>File E</u> dit <u>V</u> iew Hi <u>s</u> tory	<u>B</u> ookmarks <u>T</u> ools <u>H</u> elp					0
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🟠 Wizz RSS 2.1.9 🔘	🛅 🛅 🗟 Feed Search	🕜 Help etc. 🛛 🛃 Options etc. 🔻 🚹 V	Vatch List 🕈 🔅 Weather			
EQX serv	/er					No Upload Required
HOME SERVER PR	ROFILES INTERFACES	REPORTS ADMIN HEI	_P			<u>Loqout</u> Administrator
Servers Devices T	ielines Global SRC Av	railability Global Aliases V	firtual Ports			
DEVICES						
New Device [-]						
		*Device Type <n< td=""><td>one> 💌</td><td></td><td></td><td></td></n<>	one> 💌			
* = required						
Davies List						
Device List						
	Short Name	Long Name	Туре	Location		
	xenon128	xenon128	XENON	<u>-none-</u>	edit properties	
SELECT: All None						
Delete						
Done						

Figure 6-1: EQX Server Router Device



6.1.2. Global Source Availability

The sources associated with the router need to be made available for control.



Figure 6-2: Global Source Availability



6.1.3. Profiles

A profile is created named "dave1". The profile contains the xenon128 device. All destinations and sources of this device are available.

Profile Configuration - k	Aozilla Firefox				
<u>File Edit View History Bo</u>	ookmarks <u>T</u> ools <u>H</u> elp				
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🟠 Wizz RSS 2.1.9 🔅 🗖	📔 🖳 Feed Search 🕜 Help etc. 🛛	🖁 Options etc. 🛛 🐻 Watch List 🕶 🔅 Wea	ather		
FOX serve	r			No Upload Required	^
HOME SERVER PRO	FILES INTERFACES REPORTS	ADMIN HELP		<u>Logout</u> Administra	ator
Profiles					
PROFILES					
Select Profile					
Г					
		ADD A PROFILE	~		
	*Name: Password:	Re-enter:	Clone:		
	- Regarred				
		OR			
	Select a Pr	rofile: dave1	V 1		
		EDITING: davel			
Edit Profile [+]					
Destinations [-]					
DESTINATION AVAIL	ABILITY [-]				
	DEVICES	AVAILABLE DESTINATIONS		UNAVAILABLE DESTINATIONS	
xent	on 128	xenon128-DST-0001		~	
		xenon128-DST-0004 xenon128-DST-0005			
e de la companya de l		xenon128-DST-0006 xenon128-DST-0007	2		
		xenon128-DS1-0008 xenon128-DST-0009 xenon128-DST-0010		-	
		SELECT: <u>All</u> None		SELECT: All None	
DESTINATION PREFIX	ES [+]				
DESTINATION ALIASE	S [+]				
Sources [-]					
SOURCE AVAILABILIT	¥ [-]				
	DEVICES	AVAILABLE SOURCES		UNAVAILABLE SOURCES	
- ACCENT		xenon128-SRC-0002 xenon128-SRC-0003		-	
		xenon128-SRC-0004 xenon128-SRC-0005			
		xenon128-SRC-0006 xenon128-SRC-0007	-		
		xenon128-SRC-0009 xenon128-SRC-0009	8.3	~	
	(Sector 4	SELECT: <u>All</u> <u>None</u>		SELECT: All None	
SOURCE PREFIXES [+]	1				
SOURCE ALIASES [+]					~

Figure 6-3: Making Sources and Destinations Available Within the Profile



6.1.4. Enabling Symphony Protocol

The Symphony profile needs to be enabled for the profile.

🕲 Client Configuration - Mozilla Firefox	
Eile Edit View History Bookmarks Tools Help	
< 🕶 - 🧭 - 🤡 🎲 🚹 http://192.168.149.100/eqx/symphony/	Gr Google
🏠 Wizz RSS 2.1.9 🔅 🛅 🚍 Reed Search 🥝 Help etc.• 🔝 Options etc.• 🚯 Watch List• 🔅 Weather	
EQ server	No Upload Required
HOME SERVER PROFILES INTERFACES REPORTS ADMIN HELP	<u>Logout</u> Administrator
SYMPHONY SETUP	
Name	Profiles
DEFAULT	select clients on the left to view their profiles
	Shared Profiles dave1 SELECT: All None Unshared Profiles
Done	SELECT: All None

Figure 6-4: Enabling the Symphony Protocol for a Profile



6.1.5. Exporting Source and Destination Aliases

Click Server. And then select Global Aliases.

🕲 Global Aliases - Mozilla Firefox	
Eile Edit View Higtory Bookmarks Tools Help	0
💠 🔹 🔷 🕐 🕐 🚱 🏠 🗋 http://192.168.149.100/eqx/alias/	oogle 🔍
🏠 Wizz RSS 2.1.9 🔅 🛅 🛅 🧟 Feed Search 🧭 Help etc. 🛛 🔀 Options etc. * 🔀 Watch List* 🔅 Weather	
EQX server	No Upload Required
HOME SERVER PROFILES INTERFACES REPORTS ADMIN HELP	Logout Administrator
Servers Devices Tielines Global SRC Availability Global Aliases Virtual Ports	
ALIASES	
Import/Export Aliases [+]	
Prefixes [+]	
Destination Aliases [-]	=
ND#APT	
DEVICES	
xenon128	
PREHX: Y SEPARALOR: SUFFIX: Degin at 1	
Apply to all Profile Alias	es SAVE
per page: 288 👽	
SELECT: <u>ALL NONE</u> Port 🔶 Global Alias	
Apply to all Profile Alias	es SAVE
Done	

Figure 6-5: Global Aliases



In the Destination Aliases section click the device namely xenon128. The destination aliases will appear.

🥹 Global Aliases - Mozilla Firefox				
Eile Edit View History Bookmarks Iools Help				0
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🟠 Wizz RSS 2.1.9 🔅 🛅 🗖 🧟 Feed Search 🥥 Help el	🛃 Options etc. 🕶 🚺 Wate	:h List + 🔅 Weather		
FQX server				No Upload Required
HOME SERVER PROFILES INTERFACES REP	ORTS ADMIN HELP			Logout Administrator
Servers Devices Tielines Global SRC Availability	Global Aliases Virt	ual Ports		
ALIASES				
Import/Export Aliases [+]				
Prefixes [+]				
Destination Aliases [-]				
	DEVICE	s		
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	xenon128.0002	xenon128-DST-0	1002	
	venon128.0003	venon129-DST-(1003	
	venon120.0003	xenon120-DST-0	1004	
	xeni01120.0004	xenon128-DST-L	0004	
Done	Xen0f1120.0003	xenoni zo-DST-C		<u>M</u>

Figure 6-6: Destination Aliases



Scroll down to the *Source Aliases* section and click the device namely *xenon128*. The source aliases will appear.



Figure 6-7: Source Aliases



Scroll back to the top. Click on Import/Export Aliases.

😻 Global Aliases - Mozilla Firefox				
Eile Edit <u>V</u> iew Hi <u>s</u> tory <u>B</u> ookmarks <u>T</u> ools <u>H</u> elp				0
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🟠 Wizz RSS 2.1.9 🔅 🛅 🔂 Feed Search 🕯	🥜 Help etc. 🛛 🛃 Options etc. 🛪 🚹 W.	atch List + 🔅 Weather		
EQX server			No Upl	oad Required
HOME SERVER PROFILES INTERFACES	REPORTS ADMIN HELI	5	<u>Log</u>	<u>out</u> Administrator
Servers Devices Tielines Global SRC Av	vailability Global Aliases Vi	rtual Ports		
ALIASES				
Import/Export Aliases [-]				
	COLUMNS: Short Name Src o	vse Import Export r Dst Port Number Alias		
Prefixes [+]				
Destination Aliases [-]				
				10
	DEVIC	Ъ.		
	xenon128			
]	
	AUT O-GENERA	ATE ALIASES		
PREFIX: SE	PARATOR:	SUFFIX: begin at 1	GENERATE	
		Apply to :	all Profile Aliases SAV	E
	per page:	288 💌		
SELECT- ALL NONE	Port 🔺	Clobal Aliac		
	xenon128.0001	xenon128-DST-0001		
	xenon128.0002	xenon128-DST-0002		v
Done				

Figure 6-8: Import/Export Aliases



Click Export. Click Save to Disk. The aliases will be placed in a file called global_alias.csv.

🕲 Global Aliases - Mozilla Firefox			
Eile Edit Yiew History Bookmarks Tools Help			$\langle \rangle$
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🟠 Wizz RSS 2.1.9 🔅 🛅 🚍 🖳 Feed Search 🤪 Help etc. • 🛃 Optik	ons etc. 🛪 🚯 Watch List 🛪 🔅 Weather		
Servers Devices Tielines Global SRC Availability Global	Aliases Virtual Ports		~
ALIASES			
Import/Export Aliases [-]			
	Browse	ort	
COLUMNS: Sh	ort Name Src or Dst Port Number Alias		
	Care and a second		
Prefixes [+]	Enter name of file to save to		2
Destination Aliases [-]	Save in: 📋 My Documents	S 🖉 🖾 🖬	
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which is a: Microsoft Excel Comma Separated Values File from: http://192.168.149.100	My Videos		
r What should Firefox do with this file?	Desktop Desktop Desktop		
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Save to Disk	Mu Desursente		
 Do this automatically for files like this from now on. 	My Documents		
	My Computer		
OK Cancel			
	File name:	al_alias.csv	Save
SELECT: <u>ALL NONE</u> Port 🗌	My Network Save as type: Micr	osoft Excel Comma Separated Values File 🛛 🗙	Cancel
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	102 <u>xeno</u> 103 xeno	n128-DST-0002	
	104 <u>xeno</u>	on128-DST-0004	
http://192.168.149.100/eqx/alias/#	10E	120-DST-000E	~

Figure 6-9: Exporting Aliases



6.2. CREATING SYMPHONY SOURCE NAME FILE

Open *global_alias.csv* (previously created).

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3	xenon128	src	2	xenon128-	SRC-0002					
4	xenon128	src	3	xenon128-	SRC-0003					
5	xenon128	src	4	xenon128-	SRC-0004					
6	xenon128	src	5	xenon128-	SRC-0005					
7	xenon128	src	6	xenon128-	SRC-0006					
8	xenon128	src	7	xenon128-	SRC-0007					
9	xenon128	src	8	xenon128-	SRC-0008					
10	xenon128	src	9	xenon128-	SRC-0009					
11	xenon128	src	10	xenon128-	SRC-0010					
12	xenon128	src	11	xenon128-	SRC-0011					
13	xenon128	src	12	xenon128-	SRC-0012					
14	xenon128	src	13	xenon128-	SRC-0013					
15	xenon128	src	14	xenon128-	SRC-0014					
16	xenon128	src	15	xenon128-	SRC-0015					
17	xenon128	src	16	xenon128-	SRC-0016					
18	xenon128	src	17	xenon128-	SRC-0017					
19	xenon128	src	18	xenon128-	SRC-0018					
20	xenon128	src	19	xenon128-	SRC-0019					
21	xenon128	src	20	xenon128-	SRC-0020					
22	xenon128	src	21	xenon128-	SRC-0021					
23	xenon128	src	22	xenon128-	SRC-0022					
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25	xenon128	src	24	xenon128-	SRC-0024					
26	xenon128	src	25	xenon128-	SRC-0025					
27	xenon128	src	26	xenon128-	SRC-0026					
28	xenon128	src	27	xenon128-	SRC-0027					
29	xenon128	src	28	xenon128-	SRC-0028					
30	xenon128	src	29	xenon128-	SRC-0029					
31	xenon128	src	30	xenon128-	SRC-0030					
32	venon128	obal alias /	31	venon178-	SPC-0031					
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Figure 6-10: Opening global_alias.csv



Highlight the applicable source aliases then hit CTRL+C.

N	Aicrosoft E	xcel - glob	al_alias.cs	v				
	<u>File Edit V</u> i	iew <u>I</u> nsert	F <u>o</u> rmat <u>T</u> ool	s <u>D</u> ata <u>W</u> in	ndow <u>H</u> elp			_ 8 ×
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	A	B	C C	D DITE DOL	F	F	G	
1	Device Sho	Src or Dst	Port Numb	Alias	-			<u> </u>
2	xenon128	src	1	xenon128-	SRC-0001			
3	xenon128	src	2	xenon128-	SRC-0002			
4	xenon128	src	3	xenon128-	SRC-0003			
5	xenon128	src	4	xenon128-	SRC-0004			
6	xenon128	src	5	xenon128-	SRC-0005			
7	xenon128	src	6	xenon128-	SRC-0006			
8	xenon128	src	7	xenon128-	SRC-0007			
9	xenon128	src	8	xenon128-	SRC-0008			
10	xenon128	src	9	xenon128-	SRC-0009			
11	xenon128	src	10	xenon128-	SRC-0010			1
12	xenon128	src	11	xenon128-	SRC-0011			
13	xenon128	src	12	xenon128-	SRC-0012			
14	xenon128	src	13	xenon128-	SRC-0013			
15	xenon128	src	14	xenon128-	SRC-0014			
16	xenon128	src	15	xenon128-	SRC-0015			
17	xenon128	src	16	xenon128-	SRC-0016			
18	xenon128	src	17	xenon128-	SRC-0017			
19	xenon128	src	18	xenon128-	SRC-0018			
20	xenon128	src	19	xenon128-	SRC-0019			
21	xenon128	src	20	xenon128-	SRC-0020			
22	xenon128	src	21	xenon128-	SRC-0021			
23	xenon128	src	22	xenon128-	SRC-0022			
24	xenon128	src	23	xenon128-	SRC-0023			
25	xenon128	src	24	xenon128-	SRC-0024			
26	xenon128	src	25	xenon128-	SRC-0025			
21	xenon128	src	26	xenon128-	6RC-0026			
28	xenon128	src	27	xenon128-	6RC-0027			
29	xenon128	src	28	xenon128-	CRC-0028			
30	xenon120	SIC	29	xenon128-	CRC-0029			
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Rea	idy	1			318	NUM		

Figure 6-11: Selecting & Copying Sources



Create a new file and paste the source aliases to the first column.

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2	xenon128-	SRC-0002												
3	xenon128-	SRC-0003												
4	xenon128-	SRC-0004												
5	xenon128-	SRC-0005												
6	xenon128-	SRC-0006					1							
7	xenon128-	SRC-0007												
8	xenon128-	SRC-0008			1		1							_
9	xenon128-	SRC-0009	[
10	xenon128-	SRC-0010	_		-		_					_		
11	xenon128-	SRC-0011			-		_				-	_		
12	xenon128-	SRC-0012	-											
13	xenon128-	SRC-0013	-				_							
14	xenon128-	5RC-0014										_		
10	xenon129		-											
17	venon128-	SRC-0010										-		
18	xenon128-	SRC-0017			1									
19	xenon128-	SRC-0019									1			
20	xenon128-	SRC-0020									-			
21	xenon128-	SRC-0021												
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30	xenon128-	SRC-0030												
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Figure 6-12: Pasting Selected Source



Save the file as *symp_src.csv*.

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	Z xen	on128-c	SRC-0002	2		-			-		-		_	
	4 xen	on128-6	SRC-0004	1									_	
	5 xen	on128-	SRC-0005	5										
	6 xen	on128-	SRC-0008	5										
	7 xen	on128-	SRC-0007	-										
	8 xen	on128-c		3		-			-					
	9 xent	n120-c	SRC-0005	2 1										
_	11 xen	on128-6	SRC-0011											
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PHY [
F	avorites													
- 5.4	<u>e</u>	, File <u>n</u> an	ne: s	/mp_src	,csv						•		Save	
1.0	Places	Save as	s type:	SV (Com	nma del	imited)	(*.csv)				•		Cancel	
	Concession of the local division of the loca	6	fastden										131	-

Figure 6-13: Creating symp_src.csv

6.3. CREATING SYMPHONY DESTINATION NAME FILE

Repeat the procedure of 6.2 but use the destination aliases and save them as file symp_dst.csv.



6.4. FTP SYMPHONY NAME FILES TO 7700R-SC-BRC

Figure 6-4 shows how to transfer *symp_src.csv* and *symp_dst.csv* to the 7700R-SC-BRC's compact flash using FTP. For this example, the IP address of the 7700R-SC-BRC is 192.168.18.56.

🐼 Command Prompt	- 🗆 🗙
C:\temp>cd brc	
C:\temp\brc>dir Volume in drive C has no label. Volume Serial Number is 7853-4F61	
Directory of C:\temp\brc	
07/22/2008 10:34 AM <dir> 07/22/2008 10:34 AM <dir> 07/22/2008 10:34 AM <dir> 07/22/2008 10:34 AM 2,432 symp_dst.csv 07/22/2008 10:32 AM 2,432 symp_src.csv 2 File(s) 4,864 bytes 2 Dir(s) 57,391,185,920 bytes free</dir></dir></dir>	
C:\temp\brc>ftp -A 192.168.18.56 Connected to 192.168.18.56. 220-Evertz FTP Server. Copyright 2001 Evertz Microsystems Ltd. All rights reserved. 220 Type QUOTE HELP for information. 331 User name okay, need password. 230 User logged in, proceed. Anonymous login succeeded for DWylie@DavidWylie.burlington.evertz.tv ftp> cd [cflash] 250 Directory change ok. ftp> hash Hash mark printing On ftp: (2048 bytes/hash mark) . ftp> put symp_src.csv 200 PORT command successful. 150 Opening data connection. # 226 Transfer complete. ftp: 2432 bytes sent in 0.00Seconds 2432000.00Kbytes/sec. ftp> put symp_dst.csv 200 PORT command successful. 150 Opening data connection. # 226 Transfer complete. ftp: 2432 bytes sent in 0.00Seconds 2432000.00Kbytes/sec. ftp: 2432 bytes sent in 0.00Seconds 2432000.00Kbytes/sec. ftp> bytes sent in 0.00Seconds 2432000.00Kbytes/sec.	
C:\temp\brc>_	-

Figure 6-14: FTP CSV File Transfer

6.5. ACTIVATING SYMPHONY NAME FILES

Changes made to symp_src.csv and symp_dst.csv won't take effect until the *Do Configuration Update* parameter of section 5.5.1 is set to *True* and the VLPro *Apply* button is clicked.



7. EVERTZ CONTROL EXAMPLES

7.1. CPU LINK NO. 1 SINGLE ROUTER

Suppose we have the following:



Figure 7-1: CPU Link No. 1 Single Router Example

Where:

- the EQX server is to control the 64 x 64 router
- the 64 x 64 router, on CPU Link level 1, is communicating with the 3500 controller
- the 7700R-SC-BRC is communicating with the 3500 over a RS-232 serial link
- the 7700R-SC-BRC is communicating with the EQX server over a TCP link
- the EQX server uses Evertz level 1 (V) for the 64 x 64 router

Typically, the 3500 uses the following serial settings:

- baud = 9600
- number data bits = 8
- parity = none
- number stop bits = 2

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Refresh 🧑 🙋 1.0 Apply 👪 🔣									
General Evertz Control Configuration Evertz Control Sta	tus \\Third-Party Control Config	guration \ T	Fhird-Party Control Status \						
General	Th	nird-Party R	touter Sources	1	Third-Party	Router Destinations	_		
Configuration Up-to-Date 📃 Verbose L	ogging 🗌 N	Jumber (64		Number	64			
Do Configuration Update False -	Sc	ource	Name		Destination	Name			
Transmit Router Communication Status Traps 🛛 🖳									
Transmit Router Session Status Traps		1	Src 1		1	Dst1			
		2	Src 2		2	Dst 2			
Third-Party Router Transport		3	Src 3		3	Dst 3			
Protocol CPU Link No.1 Baud	9600 -	4	Src 4		4	Dst 4			
Type Serial (UART 3) Data Bits	8 •	5	Src 5		5	Dst 5			
Pri In Address 0.0.0.0 Parity	None	6	Src 6		6	Dst 6			
Stop Bits	2 -	7	Src 7		7	Dst 7			
Pri Port U Standard	RS232 -	8	Src 8		8	Dst 8			
Sec Ip Address 0.0.00		9	Src 9		9	Dst 9			
		10	Src 10		10	Dst 10			
CPU Link No.1 Configuration		11	Src 11		11	Dst 11			
Number Levels Level Eventz Level Level	Evertz Level	12	Src 12		12	Dst12			
	Disabled 🔻	13	Src 13		13	Dst 13			
2 Disabled 🔹 10	Disabled 🔻	14	Src 14		14	Dst14			
3 Disabled 💌 11	Disabled 🔻	15	Src 15		15	Dst15			
4 Disabled 🕇 12	Disabled 💌	16	Src 16		16	Dst 16			
5 Disabled 💌 13	Disabled 🔻	17	Src 17		17	Dst 17			
6 Disabled 💌 14	Disabled 🔻	18	Src 18		18	Dst 18			
7 Disabled 💌 15	Disabled 🔻	19	Src 19		19	Dst 19			
8 Disabled 🔻 16	Disabled 🔻	20	Src 20	-	20	Dst 20			

Figure 7-2: Evertz Control CPU Link No. 1 Single Router Configuration

7.2. CPU LINK NO. 1 TWO ROUTERS

Suppose we have the following:







Where:

- the EQX server is to control the 64 x 64 router
- the EQX server is to control the 128 x 128 router
- the 64 x 64 router, on CPU Link level 1, is communicating with the 3500 controller
- the 128 x 128 router, on CPU Link level 2, is communicating with the 3500 controller
- the 7700R-SC-BRC is communicating with the 3500 over a RS-232 serial link
- the 7700R-SC-BRC is communicating with the EQX server over a TCP link
- the EQX server uses Evertz level 1 (V) for the 64 x 64 router
- the EQX server uses Evertz level 2 (A) for the 128 x 128 router

Typically, the 3500 uses the following serial settings:

- baud = 9600
- number data bits = 8
- parity = none
- number stop bits = 2

Refresh 🧶 🧶 1.0 Apply 比 💱								
General Evertz Control Configuration Evertz Control Status Third-Party Control C	Configuration	\Third-Party Control Status \						
General	Third-Party	y Router Sources	Third-Party	Router Destinations				
Configuration Up-to-Date 📕 Verbose Logging 🗌	Number	128	Number	128				
Do Configuration Update False	Source	Name	Destination	n Name				
Transmit Router Communication Status Traps 🛛 🖉	1	Src 1	1	Det 1				
Transmit Router Session Status Traps 🛛 🗹	2							
	2	Src 2	2	Dst 2				
Third-Party Router Transport	3	Src 3	3	Dst 3				
Protocol CPU Link No.1 Baud 9600	4	Src 4	4	Dst 4				
Type Serial (UART 3) Data Bits 8	5	Src 5	5	Dst 5				
Prile Address 0.0.0.0 Parity None	6	Src 6	6	Dst 6				
Pri Brat	7	Src 7	7	Dst 7				
Standard BS232	8	Src 8	8	Dst 8				
Sec Ip Address 0.0.0	9	Src 9	9	Dst 9				
Sec Port	10	Src 10	10	Dst 10				
CPU Link No.1 Configuration	11	Src 11	11	Dst11				
Number Levels Level Eventz Level Level Eventz Level	12	Src 12	12	Dst12				
2 • 1 1 • 9 Disabled •	13	Src 13	13	Dst13				
2 2 • 10 Disabled •	14	Src 14	14	Dst 14				
3 Disabled 11 Disabled	15	Src 15	15	Dst 15				
4 Disabled 🔻 12 Disabled 👻	16	Src 16	16	Dst 16				
5 Disabled 🕶 13 Disabled 🕶	17	Src 17	17	Dst 17				
6 Disabled - 14 Disabled -	18	Src 18	18	Dst 18				
7 Disabled 🔻 15 Disabled 👻	19	Src 19	19	Dst 19				
8 Disabled V 16 Disabled V	20	Src 20	20	Dst 20				

Figure 7-4: Evertz Control CPU Link No. 1 Two Routers Configuration



7.3. VMSI 3000 ASCII SINGLE ROUTER

Suppose we have the following:



Figure 7-5: Evertz Control VMSI 3000 ASCII Single Router Example

Where:

- the EQX server is to control the 256 x 256 router
- the 256 x 256 router, on VMSI 3000 ASCII level 4, is communicating with a VM controller
- the 7700R-SC-BRC is communicating with the VM controller over a RS-232 serial link
- the 7700R-SC-BRC is communicating with the EQX server over a TCP link
- the EQX server uses Evertz level 1 (V) for the 256 x 256 router



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General		Third-Party	Router Sources	2	Third-Party	Router Destinations-	14
Configuration Up-to-Date	Verbose Logging	Number	256		Number	256	
Do Configuration Update	False	Source	Name		Destination	Name	
Transmit Router Communica	tion Status Traps 🛛 🗹						1.12
Transmit Router Session Stat	tus Traps 🕑	1	Src 1		1	Dst 1	
		2	Src 2		2	Dst 2	
-Third-Party Router Transport		3	Src 3		3	Dst 3	
Protocol VMSI 3000 ASCII	▼ Baud 38400 ▼	4	Src 4		4	Dst 4	
Type Serial (UART 3)	▼ Data Bits 8 ▼	5	Src 5		5	Dst 5	
Pri In Address 0.0.0.0	Parity None 👻	6	Src 6		6	Dst 6	
Pri Port	Stop Bits 1	7	Src 7		7	Dst 7	
Sec In Address 0.0.0.0	Standard RS232 -	8	Src 8		8	Dst 8	
See Port		9	Src 9		9	Dst 9	
		10	Src 10		10	Dst 10	
CPU Link No.1 Configuration		11	Src 11		11	Dst 11	
Number Levels Level	Evertz Level Evertz Level	12	Src 12		12	Dst 12	
1 1	1 • 9 Disabled •	13	Src 13		13	Dst 13	
2	Disabled	14	Src 14		14	Dst 14	
Monitor Crosspoints 3	Disabled	15	Src 15		15	Dst 15	
10 Seconds 🔻 4	Disabled	16	Src 16		16	Dst 16	
5	Disabled	17	Src 17		17	Dst 17	
6	Disabled	18	Src 18		18	Dst 18	
7	Disabled	19	Src 19		19	Dst 19	
8	Disabled 🔻 16 Disabled 👻	20	Src 20		20	Dst 20	
-\MSI 3000 Configuration		-Remote 2 //	Cart++) Configuration				
Controller Uses Zero-Based I	Inputs And Outputs 📝	Device	Level(UA2)	Evertz Level	Level(UA2)	Evertz Level	
Transmit Session Init Crossp	oint Status Requests 🛛	Other	▼ 1(0x01)	1 •	5(0x10)	Disabled 👻	
Validate Crosspoint Set with (Get 🔽		 2(0x02)	Disabled 👻	6(0x20)	Disabled 👻	
Destination Watch Refresh	Off	Monitor Cros	sspoints 3(0x04)	Disabled 🔻	7(0x40)	Disabled 👻	
Source Offset	0	Off	4(0x08)	Disabled 🔻	8(0x80)	Disabled 💌	
Destination Offset	0						
Level	Evertz Level Evertz Level	EScontrol C	Configuration				
1	Disabled 🔻 5 Disabled 👻	Evertz Love			I	U	
2	Disabled 🔻 6 Disabled 🔻	RouterLleve	as Zero, has ad Inputs and (Dutnute E	7		
3	Disabled 🔻 7 Disabled 💌	RouterLor	ee Crossnointe on Dower	Cvela E	1		
4	1 🔹	- Notier Los	ses crossporits on Fower		-		

Figure 7-6: Evertz Control VMSI 3000 ASCII Single Router Configuration



7.4. VMSI 3000 ASCII TWO ROUTERS

Suppose we have the following:



Figure 7-7: Evertz Control VMSI 3000 ASCII Two Routers Example

Where:

- the EQX server is to control the 256 x 256 router
- the EQX server is to control the 128 x 128 router
- the 256 x 256 router, on VMSI 3000 ASCII level 4, is communicating with a VM controller
- the 128 x 128 router, on VMSI 3000 ASCII level 7, is communicating with a VM controller
- the 7700R-SC-BRC is communicating with the VM controller over a RS-422 serial link
- the 7700R-SC-BRC is communicating with the EQX server over a TCP link
- the EQX server uses Evertz level 1 (V) for the 256 x 256 router
- the EQX server uses Evertz level 2 (A) for the 128 x 128 router



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General	ird-Party Router Sources	-Third-Pa	rty Router Destinations
Configuration Up-to-Date	lumber 256	Numbe	er 256
Do Configuration Update False	ource Name	Destina	tion Name
Transmit Router Communication Status Traps 🛛 🗹			
Transmit Router Session Status Traps	1 Src 1		Dst 1
	2 Src 2	2	Dst 2
Third-Party Router Transport	3 Src 3	3	Dst 3
Protocol VMSI 3000 ASCII Baud 38400	4 Src 4	4	Dst 4
Type Serial (UART 3) 🔻 Data Bits 8 💌	5 Src 5	5	Dst 5
Pri In Address 0.0.0.0 Parity None	6 Src 6	6	Dst 6
Pri Port 0 Stop Bits 1	7 Src 7	7	Dst 7
Sec in Address 0.0.0.0 Standard RS422	8 Src 8	8	Dst 8
See Port	9 Src 9	9	Dst 9
	10 Src 10	10	Dst10
CPU Link No.1 Configuration	11 Src 11	11	Dst11
Number Levels Level Evertz Level Level Evertz Level	12 Src 12	12	Dst12
1 • 1 1 • 9 Disabled •	13 Src 13	13	Dst13
2 Disabled 10 Disabled	14 Src 14	14	Dst14
Monitor Crosspoints 3 Disabled 11 Disabled	15 Src 15	15	Dst15
10 Seconds V 4 Disabled V 12 Disabled V	16 Src 16	16	Dst16
5 Disabled 🕶 13 Disabled 👻	17 Src 17	17	Dst17
6 Disabled 14 Disabled	18 Src 18	18	Dst 18
7 Disabled 15 Disabled	19 Src 19	19	Dst 19
8 Disabled 🕶 16 Disabled 👻	20 Src 20	20	Dst 20
	Ċ		
VMSI 3000 Configuration	emote 2 (Cart++) Configuration-		
Controller Uses Zero-Based Inputs And Outputs	vice Level(UA	(2) Eventz Level Level(U)	A2) Eventz Level
Transmit Session Init Crosspoint Status Requests	ther 1 (UxU	I) 1 ▼ 5(Ux1	U) Disabled
Validate Crosspoint Set with Get	2(0x0 nitor Crosspoints	2) Disabled 6(0x2	0) Disabled
Destination Watch Refresh Off	3(0x0	4) Disabled 7(0x4	0) Disabled 🔻
Source Offset		3) Disabled 8(0x8	0) Disabled 🔻
Destination Offset 0	Scontrol Configuration		
Level Evertz Level Level Evertz Level	Scontrol Level		⊃ n
1 Disabled 5 Disabled	Evertz Level 1	•	
2 Disabled 6 Disabled	سب Router Uses Zero-based Inputs a	and Outputs	
3 Disabled 7 2	Router Loses Crosspoints on Po	wer Cycle 🛛	
4 1			

Figure 7-8: Evertz Control VMSI 3000 ASCII Two Routers Configuration



7.5. NVEP ROUTER

Suppose we have the following:



Figure 7-9: Evertz Control NVEP Router Example

Where:

- the EQX server is to control the 256 x 256 router
- the 256 x 256 router has a primary controller card installed with IP address 192.168.18.39
- the 256 x 256 router has a secondary controller card installed with IP address 192.168.18.40
- the 7700R-SC-BRC is communicating with the router over a TCP link
- the 7700R-SC-BRC is communicating with the EQX server over a TCP link
- the EQX server uses Evertz level 1 (V) for the 256 x 256 router
- only the EQX server controls the router

The configuration of the 7700R-SC-BRC would be as follows:

Protocol	NVEF	• •	Baud	38400	•
Туре	TCP	-	Data Bits	8	•
Pri lp Addr	ess	192.168.18.39	Parity	None	•
Pri Port		5194	Stop Bits	1	•
Sec Ip Address		192.168.18.40	Standard	RS232	•
Sec Port		5194			

-NVEP Configuration		
Monitor Crosspoints	Off	•
	and the second sec	

Figure 7-10: Evertz Control NVEP Router Configuration

We can set *Monitor Crosspoints* to *Off* since only the EQX server will be making crosspoint changes on the router. If a panel, connected directly to the router, was allowed to make crosspoint changes then *Monitor Crosspoints* should be enabled.



7.6. REMOTE 2 (CART++) DIRECT MODE

Direct mode refers to connecting to the router directly. Suppose we have the following:



Figure 7-11: Evertz Control Remote 2 (Cart++) Direct Mode Example

Where:

- the EQX server is to control the HDS-X3400 16 x 16 router
- the 16 x 16 router has unit address 0x02
- the 7700R-SC-BRC is communicating with the router over a RS-422 serial link
- the 7700R-SC-BRC is communicating with the EQX server over a TCP link
- the EQX server uses Evertz level 1 (V) for the 16 x 16 router

Typically, remote 2 (cart++) routers use the following serial settings:

- baud = 38400
- number data bits = 8
- parity = even
- number stop bits = 1

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General Evertz Control Configuration Evertz	Control Status \ Third-Party Contro	ol Configuration $ig\langle$ Th	ird-Party Control Status	l		
General		Third-Party Ro	uter Sources		Third-Party I	Router Destinations
Configuration Up-to-Date	Verbose Logging	Number 16	δ		Number	16
Do Configuration Update False	-	Source	Name		Destination	Name
Transmit Router Communication Status Trap	os 🔽					
Transmit Router Session Status Traps	¥		Brc 1		1	Dst 1
		2 8	Brc 2		2	Dst 2
Third-Party Router Transport		3 3	Brc 3		3	Dst 3
Protocol Remote 2 Cart++ 🔻	Baud 38400 💌	4 8	Brc 4		4	Dst 4
Type Serial (UART 3) 👻	Data Bits 8	5 5	Brc 5		5	Dst 5
Pri In Address 0.0.0.0	Parity Even 👻	6 8	Src 6		6	Dst 6
Pri Port	Stop Bits 1	7 8	Brc 7		7	Dst 7
	Standard RS422 -	8 8	Src 8		8	Dst 8
Coo Port		9 8	Src 9		9	Dst 9
		10 8	Src 10		10	Dst 10
CPU Link No.1 Configuration		11 8	Brc 11		11	Dst 11
Number Levels Level Evertz Level	Level Evertz Level	12 8	Brc 12		12	Dst 12
	9 Disabled 🔻	13 8	Brc 13		13	Dst 13
2 Disabled 🔻	10 Disabled 💌	14 8	Brc 14		14	Dst14
3 Disabled 🔻	11 Disabled 💌	15 8	Brc 15		15	Dst 15
4 Disabled 👻	12 Disabled 🔻	16 9	Brc 16		16	Dst 16
5 Disabled 🔻	13 Disabled 💌	17 5	Brc 17		17	Dst 17
6 Disabled 🔻	14 Disabled 🔻	18 9	Brc 18		18	Dst 18
7 Disabled 🔻	15 Disabled 💌	19 9	Src 19		19	Dst 19
8 Disabled 🔻	16 Disabled 🔻	20 8	Brc 20		20	Dst 20
-VMSI 3000 Configuration		-Pomoto 2 /Corr	t++) Configuration			· · · · · · · · · · · · · · · · · · ·
Controller Uses Zero-Based Inputs And Outp	outs 💌	Device	Level(UA2)	Evertz Level	Level(UA2)	Evertz Level
Source Offset		Other	▼ 1(0x01)	Disabled 💌	5(0x10)	Disabled 🔻
Destination Offset			 2(0x02)	1 -	6(0x20)	Disabled 🔻
Level Evertz Level	Level Evertz Level	Monitor Crossp	oints 3(0x04)	Disabled -	7(0x40)	Disabled 🔻
1 Disabled 🔻	5 Disabled 💌	Off	• 4(0x08)	Disabled -	8(0x80)	Disabled 🔻

Figure 7-12: Evertz Control Remote 2 (Cart++) Direct Mode Configuration

7.7. REMOTE 2 (CART++) S-BUS CONVERSION MODE

This mode refers to the control of a router via a controller. Suppose we have the following:



Figure 7-13: Evertz Control Remote 2 (Cart++) S-BUS Conversion Mode Example





Where:

- the EQX server is to control the IXS-6700 512 x 512 router
- the 512 x 512 is on Remote 2 (Cart++) level 4
- the 7700R-SC-BRC is communicating with the router over a RS-422 serial link
- the 7700R-SC-BRC is communicating with the EQX server over a TCP link
- the EQX server uses Evertz level 1 (V) for the 512 x 512 router

0	eneral ^V Evertz C	ontrol Confi	guration VEvertz	Control Stat	tus \\Third-Party Cor	ntrol Ci	onfiguration \	Third-Party	Control Status	1				
F ¹	ieneral						Third-Party	Router Sour	rces		Third-Party	Router Destination	3	-
	Configuration Up	o-to-Date		Verbose Lo	ogging 🗌		Number	512			Number	512		
	Do Configuration	n Update	False	• 🗆			Source	Name			Destination	Name		
	Transmit Router	Communic	ation Status Trap	is <u>⊮</u>			1	Src 1			1	Dst 1		-
	Transmit Router	Session St	atus Traps	\checkmark			2	Bro 2			2	Dot 2		335
1	hird Darty Route	ur Transnor									1 n	0312		
	minu-r arty rtoute	a manapor				1	3	Src 3			3	DSt 3		
	Protocol Remo	ite 2 Cart++	-	Baud	38400 🔻		4	Src 4			4	Dst 4		
	Type Serial	(UART 3)	•	Data Bits	8 🔹		5	Src 5			5	Dst 5		
	Pri In Address	0000		Parity	Even 💌		6	Src 6			6	Dst 6		
10	hi Dort	0.0.0.0		Stop Bits	1		7	Src 7			7	Dst 7		
	-n Fun	0		Standard	BS422 -		8	Src 8			8	Dst 8		
	Sec Ip Address	0.0.0.0					9	Src 9			9	Dst 9		
	sec Port	U					10	Src 10			10	Dst 10		
	PU Link No.1 Co	nfiguration				_	11	Src 11			11	Dst 11		
Þ	umber Levels	Level	Evertz Level	Level	Evertz Level		12	Src 12			12	Dst 12		
	-	1	1 •	9	Disabled 💌		13	Src 13			13	Dst 13		
		2	Disabled 🔻	10	Disabled 💌		14	Src 14			14	Dst14		
		3	Disabled 🔻	11	Disabled 🔻		15	Src 15			15	Dst 15		
		4	Disabled 💌	12	Disabled 🔻		16	Src 16			16	Dst 16		
		5	Disabled 🔻	13	Disabled 🔻		17	Src 17			17	Dst 17		
		6	Disabled 🔻	14	Disabled 🔻		18	Src 18			18	Dst 18		
		7	Disabled 🔻	15	Disabled 🔻		19	Src 19			19	Dst 19		
		8	Disabled 🔻	16	Disabled 🔻		20	Src 20			20	Dst 20		-
	MSI 3000 Confid	iuration					-Remote 2 (0	Cart++) Conf	iquration					
	Controller Uses .	Zero-Based	Inputs And Outp	uts	¥		Device	,	Level(UA2)	Evertz Level	Level(UA2)	Evertz Level		
	Source Offset		0				HKSP-R80	•	1(0x01)	Disabled	• 5(0x10)	Disabled 💌		
	Destination Offse	et	0						2(0x02)	Disabled	• 6(0x20)	Disabled 🔻		
		Level	Evertz Level	Level	Evertz Level		Monitor Cros	spoints	3(0x04)	Disabled	• 7(0x40)	Disabled 💌		
		1	1 •	5	Disabled 🔻		Off	-	4(0x08)	1	• 8(0x80)	Disabled 🔻		
			Disabled		Disablast								1	

Figure 7-14: Evertz Control Remote 2 (Cart++) S-BUS Conversion Mode Configuration



7.8. ESCONTROL ROUTER

Suppose we have the following:



Figure 7-15: Evertz Control NVEP Router Example

Where:

- the EQX server is to control a 768 x 768 EScontrol-based router
- the router uses level 0, 0-based sources and destinations, and does not maintain its crosspoint map on a power cycle
- the 7700R-SC-BRC is communicating with the router over a RS-422 serial link
- the 7700R-SC-BRC is communicating with the EQX server over a TCP link
- the EQX server uses Evertz level 1 (V) for the 768 x 768 router

Suppose the router uses the following serial settings:

- baud = 38400
- number data bits = 8
- parity = odd
- number stop bits = 1

lumber	768		Number 76	8	
	Third-Party Rout	er Transport			
	Protocol ES C	ontrol 👻	Baud	38400	•
	Type Seria	al (UART 3) 🔻	Data Bits	8	•
	Pri lp Address	0.0.0.0	Parity	Odd	•
	Pri Port	0	Stop Bits	1	-
	Sec lp Address	0.0.0.0	Standard	RS422	-
	Sec Port	0			



EScontrol Configuration –			0
Evertz Level	1	•	
Router Uses Zero-based	I Inputs and Outputs	V	
Router Loses Crosspoin	ts on Power Cycle	1	

Figure 7-16: Evertz Control EScontrol Configuration



8. THIRD-PARTY CONTROL EXAMPLES

8.1. CPU LINK NO. 1 TO ROUTER

Suppose we have the following:



Figure 8-1: Third-Party CPU Link No. 1 Control Of Xenon Router Example

Where:

- the 3500 controller is to control a 128 x 128 Xenon router
- the 3500 is configured to use CPU Link No. 1 level 1 for the router
- the router is configured to use Evertz level 1 (V)
- the 3500 communicates with the 7700R-SC-BRC using the CPU Link No. 1 protocol over a RS-232 serial link
- the 7700R-SC-BRC communicates with the Xenon router using the Quartz protocol over a RS-232 serial link



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General	Cevertz Control Confi	guration \ E	Evertz Control Status	Third-Party C	ontrol Configuration $ig angle$ Third-	Party Control Status \
General					Router Transport	
Config	uration Up-to-Date		Verbose Loggin	9	Protocol	Quartz 👻
Do Cor	nfiguration Update	False	-		Туре	Serial (UART 2) 🔹
Transn	nit Router Communic	ation Status	Traps 🗹		Baud	38400 👻
Transn	nit Router Session St	atus Traps			Data Bits	8
-Duncto D	lautar Canfiguration-				Parity	None
Numbe	er of Sources	128			Stop Bits	1
Numbe	er of Destinations	128			Standard	RS232 👻
Remov	/e Prepended Source	& Destinati	on Numbers 🛛 🔽		lp Address	0.0.0.0
Suppo	rted Levels				Port	0
1 🗹] 2 🗌 3 🔲 4	5	6 7	8	Control Transport	
9] 10 🗌 11 🗌 1	2 🗌 13	14 15	16 🗌	Protocol	CPU Link No.1
Profile	Name	-			Туре	Serial (UART 1) 🔹
				1	Baud	9600 👻
CPU Lin	k No.1 Configuration	4		1	Data Bits	8 🗸
Numbe	Fuerta Levels	Laval	Fuertr Level		Parity	None 👻
Level		Cevei			Stop Bits	2 🔹
	Disabled w	9			Standard	RS232 👻
2	Disabled -	10			IP Address	0.0.0.0
3	Disabled -	11	Disabled -		Port	0
4		12				
5		13			EScontrol Configuration	acad Innuta And Outputs
6	Disabled 🔻	14	Disabled 💌		Controller Oses Zero-B	a seu inputs Anti Outputs 🛛 🖉
7	Disabled 🔻	15	Disabled •		Escontroi Level	0
8	Disabled 🔻	16	Disabled 🔻		Evertz Level	1
					Controller Transmits AC	CK V

Figure 8-2: Third-Party CPU Link No. 1 Control of Xenon Router Configuration

8.2. CPU LINK NO. 1 TO ROUTER

Suppose we have the following:







Where:

- the 3500 controller is to control a 128 x 128 Xenon router
- the 3500 is configured to use CPU Link No. 1 level 1 for the router
- the router is configured to use Evertz level 2 (A)
- the 3500 communicates with the 7700R-SC-BRC using the CPU Link No. 1 protocol over a RS-232 serial link
- the 7700R-SC-BRC communicates with the Xenon router using the Quartz protocol over a RS-232 serial link

General \ Evertz Control Configuration \ Evertz Control Status \ Third-Party Co	ntrol Configuration \ Third-Party	/ Control Status
General	Router Transport	· · · · · · · · · · · · · · · · · · ·
Configuration Up-to-Date 📃 Verbose Logging 🗌	Protocol	Quartz
Do Configuration Update False 🗸	Туре	Serial (UART 2)
Transmit Router Communication Status Traps 🛛 🗹	Baud	38400 💌
Transmit Router Session Status Traps	Data Bits	8
	Parity	None
Number of Sources 129	Stop Bits	1
Number of Destinations 129	Standard	RS232 -
Remove Prenended Source & Destination Numbers	lp Address	0.0.0.0
Supported Levels	Port	0
	Control Transport	
9 _ 10 _ 11 _ 12 _ 13 _ 14 _ 15 _ 16 _	Protocol	CPU Link No.1
Profile Name	Туре	Serial (UART 1)
	Baud	9600 👻
CPU Link No.1 Configuration	Data Bits	8
	Parity	None
	Stop Bits	2 🔹
2 Disabled T 10 Disabled T	Standard	RS232 👻
2 Disabled - 10 Disabled -	IP Address	0.0.0.0
	Port	0
4 Disabled ▼ 12 Disabled ▼		
5 Disabled 13 Disabled	EScontrol Configuration	
6 Disabled 14 Disabled	Controller Uses Zero-Based	I Inputs And Outputs 🛛 🗹
7 Disabled 15 Disabled	EScontrol Level	0
8 Disabled - 16 Disabled -	Evertz Level 1	•
	Controller Transmits ACK	

Figure 8-4: Third-Party CPU Link No. 1 Control of Xenon Router Configuration



8.3. ROT16 TO EQX SERVER: FULL ROUTER

Suppose we have the following:



Figure 8-5: Third-Party ROT16 Control Of Xenon Router Example

Where:

- the switcher has control over the full range of sources and destinations of a 128 x 128 Xenon router
- the router occupies sources 1 128 within the source router space of the switcher (Figure 8-6)
- the router occupies the destinations 1 128 within the destination router space of the switcher (Figure 8-6)
- the switcher assigns ROT16 level 2 to the router
- the router is under the control of the EQX server
- the switcher and the 7700R-SC-RC interface with the R80 control module
- the R80 has IP address 192.168.18.39
- the EQX server has IP address 192.168.18.40
- the 7700R-SC-BRC uses the Symphony protocol to communicate with the EQX server
- symp_src.csv, on the compact flash of the 7700R-SC-BRC, will contain the alias names of all 128 sources
- symp_dst.csv, on the compact flash of the 7700R-SC-BRC, will contain the alias names of all 128 destinations
- the ROT16/S-BUS station address assigned to the 7700R-SC-BRC is 0x06
- the product code assigned to the 7700R-SC-BRC is 0x48





Figure 8-6: Switcher Router Space

Protocol	Symphony	-
Гуре	TCP	-
3aud	38400	-
Data Bits	8	•
Parity	None	-
Stop Bits	1	-
Standard	R\$232	-
p Address	192.168.18.40	
Port	9750	
ontrol Transport-		
Protocol	ROT 16	-
уре	TCP	•
Baud	9600	-
Data Bits	8	-
Parity	None	+
Stop Bits	2	•
Standard	R\$232	÷
P Address	192.168.18.39	
	Success 7 -	


Evertz Router Configuration								
	Number of Sources	1						
	Number of Destination	ns 1						
	Remove Prepended Source & Destination Numbers 🛛 🗐							
	Supported Levels							
	1 🗹 2 🗔 3	4	5 6 7 8 0					
	9 🗌 10 🗌 11	12	🗌 13 🗌 14 🗌 15 🗌 16 🗌					
	Profile Name	a	dmin					
ļ								
105	F 16 Configuration							
77	00R-SC-BRC Station Add	ress 🔄	<u>)</u>					
77	00B CC BBC Broduct Co	do =						
	UUR-SC-BRC FIUUULLCU	ue 🗆	0x48					
Vir	tual Source Offset	0						
Vir	Virtual Destination Offset 0							
Le	Level Evertz Level Evertz Level							
1 Disabled v 5 Disabled v		Disabled 💌						
2	1 💌	6	Disabled 💌					
3	Disabled 🔻	7	Disabled 💌					
4	Disabled 💌	8	Disabled -					

Figure 8-7: Third-Party ROT16 Control Of EQX Server Configuration

8.4. ROT16 TO EQX SERVER: PARTIAL ROUTER

Suppose we have the following:







Where:

- the switcher has control over the full range of sources of a 128 x 128 Xenon router
- the switcher has control over destinations 1, 3, 5, 7, and 9 of a 128 x 128 Xenon router
- thus, the switcher thinks it is controlling a 128 x 5 router
- the router occupies the sources 1 128 within the source router space of the switcher (Figure 8-9)
- the router occupies the destinations 129 133 within the destination router space of the switcher (Figure 8-9)
- the switcher assigns ROT16 level 1 to the router
- the router is under the control of the EQX server
- the switcher and the 7700R-SC-RC interface with the R80 control module
- the R80 has IP address 192.168.18.39
- the EQX server has IP address 192.168.18.40
- the 7700R-SC-BRC uses the Symphony protocol to communicate with the EQX server
- symp_src.csv, on the compact flash of the 7700R-SC-BRC, will contain the alias names of all 128 sources
- symp_dst.csv, on the compact flash of the 7700R-SC-BRC, will contain the 5 alias names of the destinations the switcher is to control (Figure 8-10)
- the ROT16/S-BUS station address assigned to the 7700R-SC-BRC is 0x06 the product code assigned to the 7700R-SC-BRC is 0x48



Figure 8-9: Switcher Router Space



1	Α	В
1	xenon128-	DST-0001
2	xenon128-l	DST-0003
3	xenon128-l	DST-0005
4	xenon128-	DST-0007
5	xenon128-	DST-0009

Figure 8-10: symp_dst.csv For Partial Router Control

The configuration of the 7700R-SC-BRC would be as follows:

Protocol	Symphony	•
Гуре	ТСР	•
Baud	38400	•
Data Bits	8	•
Parity	None	•
Stop Bits	1	•
Standard	RS232	•
p Address	192.168.18.40	
Port	9750	
ontrol Transport—		
Protocol	ROT 16	+
Туре	TCP	•
Baud	38400	•
Data Bits	8	•
Parity	None	•
Stop Bits	1	•
Standard	RS422	•
P Address	192.168.18.39	
Port	8004	

Eve	rtz Ro	outer	Con	figu	ratio	1						
Nu	Number of Sources				1							
Nu	Number of Destinations 1											
Re	Remove Prepended Source & Destination Numbers 🛛 📝											
Su	pport	ed L	evels									
1	1	2		3		4		5	6	7	8	
9		10		11		12		13	14	15	16	
Pro	ofile N	lam	Э			8	admii	ı	 			



		~		Uхь
7700R-8	BC-BRC Product Co	ode 🗖		0x48
Virtual S	ource Offset	0		
Virtual D	estination Offset	128		
Level	Evertz Level	Level	Evertz Level	
1	1 -	5	Disabled 🔻	
2	Disabled 🔻	6	Disabled 💌	
3	Disabled 🔻	7	Disabled 💌	
4	Disabled 👻	8	Disabled -	

Figure 8-11: Third-Party ROT16 Control Of EQX Server Configuration



9. FIRMWARE UPGRADE

There are two ways to upgrade the firmware of the 7700R-SC-BRC:

- 1. Using FTP to perform the upgrade via TCP/IP. (*recommended procedure*)
- 2. Using a terminal application such as *HyperTerminal* to perform the upgrade via a serial connection.

9.1. FTP

Suppose the 7700R-SC-BRC has IP address 192.168.18.54 and that firmware file fw.bin is located in c:\temp. Open a command prompt window (in Windows: *Start/Programs/Accessories/Command Prompt*) and enter the following commands:

- 1. ftp –A 192.168.18.54
- 2. cd [boot]
- 3. hash
- 4. put c:\temp\fw.bin
- 5. quote site reboot
- 6. bye

9.2. SERIAL

- 1. Power off the 7700R-SC-BRC.
- 2. Connect to the debug/upgrade port according to instructions of section 2.3.
- 3. Power on the 7700R-SC-BRC.
- 4. Hit *CTRL*+*X* to interrupt the boot cycle. The prompt *PPCBOOT*> will appear.
- 5. Enter the command upload.
- 6. Start the firmware upload on the terminal application (for instance, in *HyperTerminal* select *Transfer/Send File...*), use Xmodem as the transfer protocol, and select the firmware file. For example, *c:\temp\fw.bin*.
- 7. Once the upload is complete the message upload okay is displayed.
- 8. At the prompt *PPCBOOT*> enter *boot*.
- 9. Remove the serial adapter cable.



10. TROUBLESHOOTING

The best tool available to diagnose problems is the event log which can be viewed using VLPro. Refer to section 5.2. If event log does not prove sufficient, the menu system of the 7700R-SC-BRC provides statistics not available to VLPro which may be useful in diagnosing communication issues. Section 2.3 details how to access the menu system.

10.1. SERIAL COMMUNICATION

These statistics relate to the serial interfaces. To access these statistics:

- 1. From the 7700R-SC-BRC's Main Menu select Engineering/Debug.
- 2. Select Serial interfaces.
- 3. Select Show statistics.
- 4. Scroll up to the heading UART x where x represents the serial port number in which you have interest. For example, UART 1 corresponds to serial port 1.

UART 1		
Num bytes rx: Num bytes tx: Num rx disc:	0×000000000 0×00000000 0×000000000	
uart 2		
Num bytes rx: Num bytes tx: Num rx disc:	0x000000000 0x0000000a 0x000000000	
UART 3		
Num bytes rx: Num bytes tx: Num rx disc:	0x00000000 0x00000000 0x000000000	
uart 4		
Num bytes rx: Num bytes tx: Num rx disc:	0×000000000 0×00000000 0×000000000	

Figure 10-1: UART Statistics



ltem	Notes
Num	Reports, in hexadecimal, the number of bytes received by the 7700R-SC-BRC over the serial
bytes rx	interface.
Num	Reports, in hexadecimal, the number of bytes transmitted by the 7700R-SC-BRC over the serial
bytes tx	interface.
Num rx disc	Reports, in hexadecimal, the number of bytes received and discarded by the 7700R-SC-BRC. This could happen if the connected device sends unsolicited data and the 7700R-SC-BRC is in the process of changing its configuration.

Table 10-1: UART Statistics

10.2. THIRD-PARTY ROUTER COMMUNICATION

These statistics pertain to communication with the third-party router. To access these statistics:

- 1. From the 7700R-SC-BRC's Main Menu select Engineering/Debug.
- 2. Select *Third-party router*.
- 3. Select Show statistics.



Figure 10-2: Third-Party Router Statistics

ltem	Notes
Num pkts tx	Reports, in hexadecimal, the number of third-party router protocol packets transmitted by the
	Reports in bevadecimal, the number of error-free third-party router protocol packets received
Num pkts rx	by the 7700R-SC-BRC.
Num pkts rx	Reports, in hexadecimal, the number of errored (for instance bad checksum) third-party router
w err	protocol packets received by the 7700R-SC-BRC.
Num rsp to	Reports, in hexadecimal, the number of instances the 7700R-SC-BRC timed-out waiting for a
Num rap to	response from the third-party router.

Table 10-2: Third-Party Router Statistics



10.3. EQX SERVER (EVERTZ CONTROL) COMMUNICATION

For the purposes of Evertz control, the status of the EQX server can be checked using the menu system. To access this information:

- 1. From the 7700R-SC-BRC's Main Menu select Engineering/Debug.
- 2. Select EQX server.
- 3. Select Show info.
- 4. Refer to the protocol handler x sections, where x = 1, 2, 3 or 4.

protocol handler 3 -	
state: idle	
sockNum: 5	
egx srv addr: 192.168	.18.40
egx srv port: 1705	
inactv tmr: 0x0549f	a87
primReqId: 0x00000	000
msgQPutIdx: 0x00010	2a5
msgQGetIdx: 0x00010	2a5
dumpPkt: n	
rxPktQPutIdx: 0x00000	000
rxPktQGetIdx: 0x00000	000
num pkt tx: 0x0000f	d65
num pkt rx: 0x00005	46c
protocol handler 4 -	
protocol handler 4 - state: idle	
protocol handler 4 - state: idle sockNum: -1	
protocol handler 4 - state: idle sockNum: -1 eqx srv addr: 0.0.0.0	
protocol handler 4 - state: idle sockNum: -1 eqx srv addr: 0.0.0.0 eqx srv port: 0	
protocol handler 4 - state: idle sockNum: -1 eqx srv addr: 0.0.0.0 eqx srv port: 0 inactv tmr: 0x00000	
protocol handler 4 - state: idle sockNum: -1 eqx srv addr: 0.0.0.0 eqx srv port: 0 inactv tmr: 0x00000 primReqId: 0x00000	 000 000
protocol handler 4 - state: idle sockNum: -1 eqx srv addr: 0.0.0.0 eqx srv port: 0 inactv tmr: 0x00000 primReqId: 0x00000 msgQPutIdx: 0x00000	 000 000 000
protocol handler 4 - state: idle sockNum: -1 eqx srv addr: 0.0.0.0 eqx srv port: 0 inactv tmr: 0x00000 primReqId: 0x00000 msgQPutIdx: 0x00000 msgQGetIdx: 0x00000	 000 000 000 000
protocol handler 4 - state: idle sockNum: -1 eqx srv addr: 0.0.0.0 eqx srv port: 0 inactv tmr: 0x00000 primReqId: 0x00000 msgQPutIdx: 0x00000 msgQGetIdx: 0x00000 dumpPkt: n	 000 000 000 000
protocol handler 4 - state: idle sockNum: -1 eqx srv addr: 0.0.0.0 eqx srv port: 0 inactv tmr: 0x00000 primReqId: 0x00000 msgQPutIdx: 0x00000 dumpPkt: n rxPktQPutIdx: 0x00000	 000 000 000 000 000
protocol handler 4 - state: idle sockNum: -1 eqx srv addr: 0.0.0.0 eqx srv port: 0 inactv tmr: 0x00000 primReqId: 0x00000 msgQGetIdx: 0x00000 dumpPkt: n rxPktQPutIdx: 0x00000 rxPktQGetIdx: 0x00000	 000 000 000 000 000
protocol handler 4 - state: idle sockNum: -1 eqx srv addr: 0.0.0.0 eqx srv port: 0 inactv tmr: 0x00000 primReqId: 0x00000 msgQPutIdx: 0x00000 msgQGetIdx: 0x00000 dumpPkt: n rxPktQPutIdx: 0x00000 rxPktQGetIdx: 0x00000 num pkt tx: 0x00000	 000 000 000 000 000 000

Figure 10-3: EQX Server Status

As an example, Figure 10-3 shows that protocol handler 3 of the 7700R-SC-BRC is communicating with an EQX server with IP address 192.168.18.40, port 1705. Protocol handler 4 is free.



10.4. EVERTZ ROUTER OR EQX SERVER (THIRD-PARTY CONTROL) COMMUNICATION

These statistics pertain to communication with the Evertz router or EQX server. To access these statistics:

- 1. From the 7700R-SC-BRC's Main Menu select Engineering/Debug.
- 2. Select *Evertz router*.
- 3. Select Show statistics.



Figure 10-4: Evertz Router Statistics

ltem	Notes
Num pkts tx	Reports, in hexadecimal, the number of protocol packets transmitted by the 7700R-SC-BRC to the third-party Evertz router or EQX server.
Num pkts rx	Reports, in hexadecimal, the number of error-free protocol packets received by the 7700R-SC-BRC.
Num pkts rx w err	Reports, in hexadecimal, the number of errored (for instance bad data) protocol packets received by the 7700R-SC-BRC.
Num rsp to	Reports, in hexadecimal, the number of instances the 7700R-SC-BRC timed-out waiting for a response from the Evertz router or EQX server.

Table 10-3: Evertz Router Statistics

10.5. THIRD-PARTY CONTROL DEVICE COMMUNICATION

These statistics pertain to communication with the third-party control device. To access these statistics:

- 4. From the 7700R-SC-BRC's Main Menu select Engineering/Debug.
- 5. Select Third-party control.
- 6. Select Show statistics.





Figure 10-5: Third-Party Control Statistics

Item	Notes
Num pkts tx	Reports, in hexadecimal, the number of third-party control protocol packets transmitted by the 7700R-SC-BRC to the third-party control device.
Num pkts rx	Reports, in hexadecimal, the number of error-free third-party control protocol packets received by the 7700R-SC-BRC.
Num pkts rx w err	Reports, in hexadecimal, the number of errored (for instance bad checksum) third-party control protocol packets received by the 7700R-SC-BRC.
Num rsp to	Reports, in hexadecimal, the number of instances the 7700R-SC-BRC timed-out waiting for a response from the third-party control device.

Table 10-4: Third-Party Control Statistics